



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

A skilled and Ethical Society

UPPER PRIMARY SCHOOL CURRICULUM DESIGN

AGRICULTURE AND NUTRITION

GRADE 5

First Published 2017

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
NATIONAL GOALS OF EDUCATION	ii
LESSON ALLOCATION AT UPPER PRIMARY.....	iv
LEVEL LEARNING OUTCOMES	v
ESSENCE STATEMENT	v
SUBJECT GENERAL LEARNING OUTCOMES.....	v
1.0 CONSERVATION OF RESOURCES	2
2.0 FOOD PRODUCTION PROCESSES.....	7
3.0 HYGIENE PRACTICES	13
4.0 PRODUCTION TECHNIQUES.....	17
APPENDIX 1: COMMUNITY SERVICE LEARNING PROJECT.....	21
APPENDIX II: LIST OF ASSESSMENT METHODS, LEARNING RESOURCES AND SUGGSTED ASSESSMENT METHODS	24

NATIONAL GOALS OF EDUCATION

1. Foster nationalism, patriotism, and promote national unity

Kenya's people belong to different communities, races and religions and should be able to live and interact as one people. Education should enable the learner acquire a sense of nationhood and patriotism. It should also promote peace and mutual respect for harmonious co-existence.

2. Promote social, economic, technological and industrial needs for national development

Education should prepare the learner to play an effective and productive role in the nation.

a) Social Needs

Education should instil social and adaptive skills in the learner for effective participation in community and national development.

b) Economic Needs

Education should prepare a learner with requisite competences that support a modern and independent growing economy. This should translate into high standards of living for every individual.

c) Technological and Industrial Needs

Education should provide the learner with necessary competences for technological and industrial development in tandem with changing global trends.

3. Promote individual development and self-fulfilment

Education should provide opportunities for the learner to develop to the fullest potential. This includes development of one's interests, talents and character for positive contribution to the society.

4 Promote sound moral and religious values

Education should promote acquisition of national values as enshrined in the Constitution. It should be geared towards developing a self-disciplined and ethical citizen with sound moral and religious values.

5. Promote social equity and responsibility

Education should promote social equity and responsibility. It should provide inclusive and equitable access to quality and differentiated education; including learners with special educational needs and disabilities. Education should also provide the learner with opportunities for shared responsibility and accountability through service learning.

6. Promote respect for and development of Kenya's rich and varied cultures

Education should instil in the learner appreciation of Kenya's rich and diverse cultural heritage. The learner should value own and respect other people's culture as well as embrace positive cultural practices in a dynamic society.

7. Promote international consciousness and foster positive attitudes towards other nations

Kenya is part of the interdependent network of diverse peoples and nations. Education should therefore enable the learner to respect, appreciate and participate in the opportunities within the international community. Education should also facilitate the learner to operate within the international community with full knowledge of the obligations, responsibilities, rights and benefits that this membership entails.

8. Good health and environmental protection

Education should inculcate in the learner the value of physical and psychological well-being for self and others. It should promote environmental preservation and conservation, including animal welfare for sustainable development.

LESSON ALLOCATION AT UPPER PRIMARY

S/No	Learning Area	Number of Lessons
1.	English	5
2.	Kiswahili / Kenya Sign Language	4
3.	Mathematics	5
4.	Religious Education	3
5.	Science & Technology	4
6.	Agriculture and Nutrition	4
7.	Social Studies	3
8.	Creative Arts	6
9.	Pastoral/Religious Instruction Programme	1
Total		35

LEVEL LEARNING OUTCOMES

By the end of the Primary Education, the learner should be able to:

- a) Communicate appropriately using verbal and or non-verbal modes in a variety of contexts.
- b) Demonstrate mastery of number concepts to solve problems in day to day life
- c) Demonstrate social skills, moral and religious values for positive contribution to society
- d) Develop one's interests and talents for personal fulfilment
- e) Make informed decisions as local and global citizens of a diverse, democratic society in an interdependent world.
- f) Explore, manipulate, manage and conserve the environment effectively for learning and sustainable development
- g) Acquire digital literacy skills for learning and enjoyment.
- h) Appreciate the country's rich, diverse cultural heritage for harmonious living

ESSENCE STATEMENT

Agriculture and Nutrition is an integrated learning area comprising aspects of agriculture and home science. The learners will acquire knowledge, skills, attitudes and values related to conservation of resources, food production, hygiene and related production techniques. The learning area anchors on socio-economic pillar of Kenya Vision 2030 to promote health, hygiene, food and nutrition security through education. The curriculum will develop competencies in personal and environmental hygiene, foods and nutrition, basic clothing construction, laundry, crop and animal production and conservation of resources. The acquired knowledge, skills and attitudes will form grounds for further development of the competencies in junior school and beyond.

SUBJECT GENERAL LEARNING OUTCOMES

1. Participate actively in agricultural and household activities in conservation of resources.
2. Use scarce resources through innovative practices to contribute towards food and nutrition security.
3. Engage in food production processes for self-sustainability, health and economic development.
4. Adopt personal and environmental hygiene practices for healthy living.

5. Apply appropriate production techniques, innovative technologies, digital and media resources to enhance sustainable agricultural and household practices.
6. Appreciate agricultural and household skills as a worthy niche for hobby, career development, further education and training.

SUMMARY OF STRANDS AND SUB STRANDS GRADE 5

S/N	STRANDS	SUB STRANDS
1.0	Conservation of Resources	1.1 Soil Conservation
		1.2 Water Conservation
		1.3 Conserving Wild Animals
2.0	Food Production Processes	2.1 Growing Vegetables
		2.2 Uses of Domestic Animals
		2.3 Preservation of Cereals and Pulses
		2.4 Food Nutrients
		2.5 Dry Fat Frying and Deep Frying
3.0	Hygiene Practices	3.1 Good Grooming Practices
		3.2 Home Hygiene
		3.3 Laundering Cotton Item
4.0	Production Techniques	4.1 Repairing Garments
		4.2 Constructing Vertical and Horizontal Garden

1.0 CONSERVATION OF RESOURCES

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
1.0 Conservation of Resources	1.1 Soil Conservation (8 lessons)	By the end of the sub-strand the learner should be able to: a) Identify sites for soil improvement in the school or community b) Construct organic waste pit for soil improvement c) Demonstrate use of plant remains for soil improvement.	Learners are guided to: • Discuss and identify sites in the school or community that have poor soil for crop growth. • Construct a pit, a site or a structure for dumping plant residue and suitable food remains and organic kitchen wastes in school. • Plant crop in a residue pit to observe and appreciate soil improvement from accumulated organic wastes. • Learners to develop observation skills as they identify appropriate site, value of unity as they work to construct the pit and environmental awareness while recycling organic wastes in the pit method to improve the soil.	How can we improve the soil using suitable organic wastes?
<p>Core competencies: Critical thinking and problem solving: observation skills as learners identify appropriate sites for soil improvement.</p>				
<p>Values: Unity: collaborative skills as learners construct organic waste pit for soil improvement.</p>				
<p>Pertinent and contemporary issues: Environmental conservation as learners recycle organic wastes through the organic waste pit.</p>				
<p>Link to other subjects: Learners relate the construction and use of organic waste pit to waste management skills learnt in science and technology</p>				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
1.0 Conservation of Resources	1.2. Water Conservation (9 lessons)	By the end of the sub strand the learner should be able to: a) Identify ways of conserving water for household gardening b) Practice water conservation within the school or community c) Appreciate importance of conserving water in the community.	Learners are guided to: <ul style="list-style-type: none"> • Use devices or other resources to search for information on ways of water conservation such as <i>mulching, cover cropping and shading</i> in kitchen and backyard gardening. • Make presentations to share experiences on importance of conserving water (mulching, cover cropping and shading) in kitchen and backyard gardening activities. • Practice various ways of conserving water in farming (<i>Mulching, shading, cover cropping</i>) within the school. • In groups learners to experiment on mulching (mulch some crops and leave others un-mulched and compare moisture conservation). • Learners develop learning to learn by engaging in self-driven task of water conservation, responsible use of devices 	How can we conserve soil water in household gardening practices?

			to search for information and environmental awareness as they sustain available soil water.	
Core competencies:				
Learning to learn: learning independently as learners engage in self-driven tasks for water conservation.				
Values:				
Integrity: taking personal responsibility in the use of digital devices while searching for information on water conservation.				
Pertinent and contemporary issues:				
Environmental awareness as the learners conserve soil moisture through gardening practices.				
Link to other subjects:				
Learners relate water conservation to knowledge on natural resources in the environment learnt in social studies.				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
1.0 Conservation of Resources	1.3 Conserving Wild Animals (6 lessons)	By the end of the sub strand the learner should be able to: a) Identify ways of repelling wild animals to avoid damage of property b) Repel wild animals to avoid destruction of property c) Appreciate importance of living better with wild animals.	Learners are guided to: <ul style="list-style-type: none"> • Watch video clips or listen to a resource person on safe ways of repelling wild animals (such as use of smoke, smells) to avoid damage on property (crops and domestic animals) and live better with wild animals. • Innovate safe ways of repelling small wild animals (<i>smoke, use of smell repellent or any other</i>). • Learners develop critical thinking skills to solve the problem of destruction of property, demonstrating value of patriotism (love) for the environment by living better with wild animals and care for biodiversity. 	How can we repel wild animals to avoid destruction of property?
Core competencies: Critical thinking and problem solving: evaluation and decision making skill as learners explore ways of solving destruction of property by wild animals.				
Values: Patriotism: learners show love for the environment by conserving animal diversity.				
Pertinent and contemporary issues: Conservation of biodiversity as learners appreciate cultural heritage in their community.				
Link to other subjects: Learners relate conservation of wild animals to conservation of natural resources learnt in social studies.				

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to describe conservation of resources	Describes conservation of three resources (soil, water and wild animals) with exemplary details.	Describes conservation of three resources (soil, water and wild animals).	Describes conservation of two resources (soil, water and wild animals).	Describes conservation of less than two resources (soil, water and wild animals).
Ability to conserve resources	Applies contextually applicable measures to conserve resources (soil, water and wild animals) with some practices that are innovative.	Applies suitable measures to conserve resources (soil, water and wild animals).	Applies measures to conserve resources (soil, water and wild animals) with some practices that require improvements.	Applies measures to conserve resources (soil, water and wild animals) with some practices that require corrections for suitability.
Ability to show responsibility in conservation of resources	Shows leadership, personal initiative and dutifulness in undertaking tasks in conservation of resources (soil, water, and wild animals).	Shows personal initiative and dutifulness in undertaking tasks in conservation of resources (soil, water and wild animals).	Shows dutifulness in undertaking tasks in conservation of resources (soil, water and wild animals).	Requires prompt to undertake tasks in conservation of resources (soil, water and wild animals).

2.0 FOOD PRODUCTION PROCESSES

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
2.0 Food Production Processes	2.1 Growing Vegetables (9 lessons)	By the end of the sub strand the learner should be able to: a) Identify gardening practices for vegetables b) Establish a nursery bed for vegetables c) Grow vegetable crop after transplanting d) Appreciate the importance of vegetables in provision healthy meals diet.	Learners are guided to: <ul style="list-style-type: none"> Brainstorm and share experiences on gardening practices of vegetables in a <i>nursery bed</i>. Prepare a nursery bed (<i>container or ground nursery</i>), sow vegetable seed and take care of the seedling. Make class presentations importance of growing vegetables as a source of food for animals and humans. Learners develop self-efficacy in producing their own vegetable foods, the value of social justice in sharing of tasks, and financial literacy skills by reducing daily vegetable purchases. 	How does growing vegetables contribute to food production?
Core competencies: Self-efficacy: self-drive as learners undertake projects to grow vegetable crops.				
Values: Social justice: learners foster fairness in sharing and undertaking of duties in the vegetable production project.				
Pertinent and contemporary issues: Financial literacy as the learners appreciate saving on cost at school or family level by growing own vegetables.				
Link to other subjects:				

Learners relate growing of vegetables to social economic activities in the community learnt through social studies.				
Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
2.0 Food Production Processes	2.2 Uses of Domestic Animals (8 lessons)	By the end of the sub strand the learner should be able to: a) Identify uses of various domestic animals in food production b) Relate various domestic animals to their uses c) Appreciate the importance of domestic animals in food production.	Learners are guided to: <ul style="list-style-type: none"> Brainstorm and share experiences on the uses of domestic animals in food production (<i>bees, rabbits, camels, fish, pigs, donkeys, dogs and cats</i>). Match domestic animals to their uses. Make class presentations on importance of domestic animals in food production while relating contributions of all the scoped animals. Learners develop communication skills as they present the uses of domestic animals, patriotism as they appreciate diversity of animals in the country, and appreciate importance of animals in food security. 	How are domestic animals important in food production?
Core competencies: Communication and collaboration: speaking clearly and effectively as learners make presentations on uses of domestic animals in food production.				
Values: Patriotism: appreciating own culture by recognizing diversity of domestic animals reared in the country.				
Pertinent and contemporary issues: Food and nutrition security as the learners appreciate the direct and indirect uses of domestic animals in food production.				
Link to other subjects:				

Learners relate the rearing and uses of domestic animals as socio-economic activity learnt in social studies.				
Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
2.0 Food Production Processes	2.3 Preservation of Cereals and Pulses (10 lessons)	By the end of the sub strand the learner should be able to: a) Describe methods of preserving cereals and pulses the locality b) Preserve cereals and pulses for food security c) Appreciate the importance of preserving cereals and pulses for food security.	Learners are guided to: <ul style="list-style-type: none"> Brainstorm and share experiences on methods of preserving and storing cereals and pulses (<i>such as sun drying, use of ashes, use of airtight containers</i>) at household level. Preserve and store cereals and pulses using methods such as sun drying, use of ash and airtight containers. Make class presentations to share experiences on importance of preserving and storing cereals and pulses. Learners develop critical thinking skills to solve the problem of food spoilage, the value of unity and team work as learners make class presentations and food security awareness in preserving foods. 	How does preservation and storage of cereals and pulses enhance food security?
Core competencies: Critical thinking and problem solving: exploring ways of preserving and storing cereals and pulses to prevent spoilage.				
Values: Unity: taking turns while undertaking tasks in preservation of cereals and pulses.				
Pertinent and contemporary issues: Food and nutrition security as learners preserve available cereals and pulses to prevent food wastage and spoilage.				
Link to other subjects: Learners relate skills in preservation of cereals and pulses to farming activities in the community learnt in social studies.				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
2.0 Food Production Processes	2.4 Food Nutrients (10 lessons)	By the end of the sub strand the learner should be able to: a) Explain functions of food nutrients in the body b) Categorize foods based on their major nutrients c) Appreciate the importance of various nutrients in the body.	Learners are guided to: <ul style="list-style-type: none"> • Search and share information on functions of food nutrients (<i>carbohydrates, vitamins, proteins, fats</i>). • Use real food materials, photographs, to categorize foods based on their major nutrients (<i>protein rich foods, carbohydrates rich foods, vitamins and minerals rich foods</i>). • Make class presentations on the importance of various nutrients in the body. • Learners develop digital literacy as they search for information on nutrients, value of unity as they make presentations and health promotion as they learn about the importance of nutrients in the body. 	Why is the knowledge of food nutrients important in food production?
<p>Core Competencies: Digital literacy: interaction with digital technologies while searching for information on food nutrients.</p>				
<p>Values: Unity: respect of each other's opinions while making presentations on importance of nutrients in the body.</p>				
<p>Pertinent and contemporary issues: Health promotion as learners learn the importance of food nutrients in the body.</p>				
<p>Link to other subjects: Learners relate food nutrients to prevention of non-communicable diseases learnt in science and technology.</p>				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
2.0 Food Production Processes	2.5 Dry Fat Frying and Deep Frying (9 lessons)	By the end of the sub strand the learner should be able to: a) Describe dry fat frying and deep frying as methods of cooking b) Cook food using dry fat frying and deep frying methods c) Embrace dry fat frying and deep frying in food production.	Learners are guided to: <ul style="list-style-type: none"> • Watch video clip or demonstration on dry fat frying and deep frying methods of cooking. • Cook and serve dry fried and deep fried foods. • Learners develop learning to learn while working cautiously to dry frying and deep frying processes, working resiliently while following cooking steps, promoting safety measures while working with fire and fats. 	How can we cook foods using dry fat frying and deep frying methods?
Core Competencies: Learning to learn: self-discipline as learners work cautiously to fry foods.				
Values: Responsibility: observing safety as learners handle hot fats and equipment in frying foods.				
Pertinent and contemporary issues: Safety and security for self and others as learners handle hot equipment and fat while frying food.				
Link to other subjects: Learners relate safety and first aid from burns and scald to knowledge learnt in science and technology.				

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to describe food production processes	Describe four food production processes (growing vegetables, use of domestic animals, preservation of cereals and pulses, cooking by frying) in exceptionally elaborate details.	Describe four food production processes (growing vegetables, use of domestic animals, preservation of cereals and pulses, cooking by frying).	Describe two to three food production processes (growing vegetables, use of domestic animals, preservation of cereals and pulses, cooking by frying).	Describe less than two food production processes (growing vegetables, use of domestic animals, preservation of cereals and pulses, cooking by frying).
Ability to apply food production processes at household level.	Applies four food production processes at household level using creative and innovative approaches.	Applies four food production processes at household level.	Applies two to three food production processes at household level.	Applies less than two food production processes at household level.
Ability to portray integrity in food production processes.	Portrays more than three indicators of integrity in the allocated tasks of food production processes.	Portrays three indicators of integrity (commitment to tasks, is honest and accountable) in the allocated tasks of food production processes.	Portrays two indicators of integrity (commitment to tasks, is honest and accountable) in the allocated tasks of food production processes.	Portrays less than two indicators of integrity (commitment to tasks, is honest and accountable) in the allocated tasks of food production processes.

3.0 HYGIENE PRACTICES

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
3.0 Hygiene Practices	3.1 Good Grooming Practices (7 lessons)	By the end of the sub strand the learner should be able to: a) Describe good grooming as a daily health habit b) Practice good grooming as a daily health habit c) Appreciate good grooming as a healthy habit.	Learners are guided to: <ul style="list-style-type: none"> • Discuss and share experiences on aspects of good grooming such dressing for different occasions. • Demonstrate different ways of dressing and etiquette for different activities. • Adopt good grooming while carrying out daily chores. • Learners develop self-confidence while promoting good grooming, respect (open mindedness) in appreciating others and personal hygiene to promote preventive health. 	How does good grooming promote personal hygiene?
<p>Core competencies: Self-efficacy: identification of self as learners develop good grooming habits.</p>				
<p>Values: Respect: positive regard for self and others as learners adopt good grooming habit.</p>				
<p>Pertinent and contemporary issues: Health promotion as learners adopt preventive health practices through good grooming habits.</p>				
<p>Link to other subjects: Learners relate good grooming habits to self-discovery learnt in social studies.</p>				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
3.0 Hygiene Practices	3.2 Home Hygiene (9 lessons)	By the end of the sub strand the learner should be able to: a) Identify surfaces made from different materials in home environment b) Clean different types of surfaces in the home environment c) Appreciate living in a clean home environment to promote healthy living.	Learners are guided to: <ul style="list-style-type: none"> • Discuss and share experiences on surfaces made from different materials such as <i>glass, wooden, earthen floors, cemented and tiled.</i> • Clean different types of surfaces such as <i>glass, wooden, earthen floors, cemented and tiled.</i> • Learners develop listening and speaking skills while brainstorming, unity while cleaning surfaces and safety while they take personal care in the cleaning activity. 	How do you clean surfaces made from different materials?
<p>Core Competencies: Communication and collaboration: listening and speaking skills using facts to support opinions in brainstorming on home hygiene.</p>				
<p>Values: Unity: taking turns in activities while learners participate in cleaning surfaces.</p>				
<p>Pertinent and contemporary issues: Safety of self and others while learners clean surfaces at home.</p>				
<p>Link to other subjects: Learners relate cleaning of surfaces to prevention of contamination and prevention of spreading communicable diseases learnt in science and technology.</p>				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
3.0 Hygiene Practices	3.3 Laundering Cotton Item (10 lessons)	By the end of the sub strand the learner should be able to: a) Describe how to launder a cotton item b) Launder a cotton item for personal hygiene c) Appreciate importance of laundry work for hygiene purposes.	Learners are guided to: <ul style="list-style-type: none"> • Watch a clip or observe a demonstration on how to launder a cotton item (<i>white and fast coloured cotton</i>). • Launder a white and fast coloured cotton item. • Practice laundering of white and fast coloured items at home to appreciate the importance of laundry work for personal hygiene. • Learners develop learning to learn as they adopt learnt skills to launder personal items, responsibility while taking care of the personal items and hygiene promotion by maintaining cleanliness. 	How does laundering cotton items promote hygiene?
<p>Core Competencies: Leaning to learn: sharing of ideas when carrying out activities with peers in laundering cotton items.</p>				
<p>Values: Responsibility: taking care of personal items in the laundering of cotton items.</p>				
<p>Pertinent and contemporary issues: Personal hygiene as they clean cotton items to promote health.</p>				
<p>Link to other subjects: Learners relate personal hygiene to communicable diseases learnt in science and technology.</p>				

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to describe hygiene practices as a daily health habit.	Describes three hygiene practices (good grooming, home hygiene, laundering items) in elaborate details.	Describes three hygiene practices (good grooming, home hygiene, laundering items) as daily health habit.	Describes two hygiene practices (good grooming, home hygiene, laundering items) as daily health habit.	Describes less than two hygiene practices (good grooming, home hygiene, laundering items) as daily health habit.
Ability to carry out hygiene practices as a daily health habit.	Carry out three hygiene practices (good grooming, home hygiene, laundering items) as daily health with specific attention to details.	Carry out three hygiene practices (good grooming, home hygiene, laundering items) as daily health habit.	Carry out two hygiene practices (good grooming, home hygiene, laundering items) as daily health habit.	Carry out less than two hygiene practices (good grooming, home hygiene, laundering items) as daily health habit.
Ability to exhibit responsibility in hygiene practices	Exhibits more than three aspects of responsibility in hygiene practices.	Exhibits three aspects of responsibility (care for self, own property and others, observes safety and is self-directed) in hygiene practices.	Exhibits two aspects of responsibility (care for self, own property and others, observes safety and is self-directed) in hygiene practices.	Exhibits less than two aspects of responsibility (care for self, own property and others, observes safety and is self-directed) in hygiene practices.

4.0 PRODUCTION TECHNIQUES

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
4.0 Production Techniques	4.1 Repairing Garments (11 lessons)	By the end of the sub strand the learner should be able to: a) Identify stiches used in repairing garment b) Make samples of stiches used to repair garments c) Use the stiches to repair gapping seam d) Adopt the stiches to repair of garments.	Learners are guided to: <ul style="list-style-type: none"> • Use pictures, realia, video clips and charts to identify stiches such as <i>back stitch and running stitch</i> used in repairing garment • Make samples of running and back stitch. • Use back stitch and running stitch to repair gapping seam. • Adopt the stiches to repair their daily wear. • Learners develop problem solving skills as they repair their garments, responsibility as learners take care of their clothes and financial literacy as learners save costs of repairs. 	How can we repair garments?
<p>Core Competencies: Critical thinking and problem solving: evaluation and decision making skills as learners explore ways of repairing garment.</p>				
<p>Values: Responsibility: taking care of personal items through repairing of worn out parts.</p>				
<p>Pertinent and contemporary issues: Financial literacy as learners save costs by repairing own clothes.</p>				
<p>Link to other subjects: Learners relate cloth repairing skills such as use of colours to choice of colours learnt in creative arts for aesthetic purposes.</p>				

Strand	Sub strand	Specific learning outcomes	Suggested learning experiences	Suggested key inquiry questions
4.0 Production Techniques	4.2 Constructing Vertical and Horizontal Garden (14 lessons)	By the end of the sub strand the learner should be able to: a) Distinguish between horizontal and vertical innovative gardening b) Construct vertical and horizontal gardens for growing crop c) Adopt the use of vertical and horizontal gardens in growing crops.	<ul style="list-style-type: none"> • Learners watch or observe stimulus materials (video clips, pictures, and photographs) on innovative gardening practices showing various crops in innovative gardens (<i>vertical and horizontal gardens</i>). • Learners to use <i>sacks, plastic bottles, walls, plastic pipes</i> among others to construct vertical and horizontal gardens for growing crops. • Learners use the vertical and horizontal gardens to grow appropriate crop. • Creativity and innovation skills as learners design and construct the gardens, team work as the learners construct the gardens and problems solving as learners solve pertinent problem of space for growing crops. 	How can gardening be done on vertical and horizontal spaces?
Core competencies: Creativity and imagination: designing and assembling skills as learners innovate vertical and horizontal gardens.				
Values: Unity: team spirit as learners take turns in constructing vertical and horizontal garden.				

Pertinent and contemporary issues:

Environmental awareness as learners learn how to utilize limited spaces through use of vertical and horizontal gardens.

Link to other subjects:

- Learners relate designing structures and use of craft tools to skills learnt in creative arts.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to explain various production techniques	Explain various production techniques (repair of garments, construction of vertical and horizontal gardens) with exemplified or illustrated details.	Explain various production techniques (repair of garments, construction of vertical and horizontal gardens)	Explain various production techniques (repair of garments, construction of vertical and horizontal gardens) with details that require improvement for clarity.	Explain various production techniques (repair of garments, construction of vertical and horizontal gardens) with details that require correction.
Ability to apply various production techniques	Applies various production techniques (repairing a garment, constructing vertical and horizontal garden) to develop a useable and aesthetically appealing output.	Applies various production techniques (repairing a garment, constructing vertical and horizontal garden) to develop a useable output.	Applies various production techniques (repairing a garment, constructing vertical and horizontal garden) to develop a partially useable output.	Applies various production techniques (repairing a garment, constructing vertical and horizontal garden) to develop an output that require correction to be useable.

<p>Ability to exhibit unity in carrying out various production techniques.</p>	<p>Exhibits more than three aspects of unity (team spirit, shares available resources and collaborates with others) in various production techniques.</p>	<p>Exhibits three aspects of unity (team spirit, shares available resources and collaborates with others) in various production techniques.</p>	<p>Exhibits two aspects of unity (team spirit, shares available resources and collaborates with others) in various production techniques.</p>	<p>Exhibits less than two aspects of unity (team spirit, shares available resources and collaborates with others) in various production techniques.</p>
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APPENDIX 1: COMMUNITY SERVICE LEARNING PROJECT

CSL at Upper Primary (grade 4-6)

At this level, the goal of the CSL activity is to provide linkages between concepts learnt in the various Learning Activities and the real life experiences. Learners begin to make connections between what they learn and the relevance to their daily life. CSL is hosted in the Social studies learning area. The implementation of the CSL activity is a collaborative effort where the class teacher coordinates and works with other subject teachers to design and implement the integrated CSL activity. Though they are teacher-guided, the learners should progressively be given more autonomy to identify problems and come up with solutions. The safety of the learners should also be taken into account when selecting the CSL activity. The following steps for the integrated CSL activity should be staggered across the school terms:

Steps in carrying out the integrated CSL activity

1) Preparation

- Map out the targeted core competencies, values and specific learning areas skills for the CSL activity
- Identify resources required for the activity (locally available materials)
- Stagger the activities across the term (Set dates and time for the activities)
- Communicate to learners, parents/caregivers/guardians, school administration, teachers and other relevant stakeholders in the school community
- Identify and develop assessment tools

2) **Implementation CSL Activity**

- Assigning roles to learners.
- Ensure every learner actively participates in the activity
- Observe learners as they carry out the CSL activity and record feedback.
- Use an appropriate assessment tool to assess both the process and the product (Assess learner's work from the beginning to the end product)
- Assess the targeted core competencies, values and subject skills.

3) **Reflection on the CSL Activity**

Conduct a self-evaluation session with learners on the integrated CSL activity undertaken by discussing the following:

- what went well and why
- what did not go well and why,
- what can be done differently next time
- what they have learnt.

There will be **one** integrated CSL activity that will be conducted **annually**. The thematic areas for the integrated CSL activity will be derived from the broader categories of the PCIs and concepts from the various Learning Areas. Teachers are expected to vary the themes yearly to allow learners to address different PCIs within their contexts. There should be a linkage between the skills from the learning areas and the themes.

The integrated CSL activity will take a Whole School Approach (WSA) where the entire school community is involved (learners, parents/caregivers/guardians, school administration, teachers). Parents/caregivers/guardians are key stakeholders in the planning

and execution of the CSL activity. Although the teacher takes the lead role in the planning and integration of the CSL activity, learners will be expected to participate actively in the whole process.

The CSL activity provides an opportunity for the development of core competencies and the nurturing of various values. The teacher is expected to vary the core competencies and values emphasised in the activity yearly.

Assessment of the CSL Activity

Assessment of the integrated CSL activity will focus on 3 components namely: skills from various learning areas applied in carrying out the activity, and core competencies and values demonstrated. Assessment should focus on both the process and end product of the CSL activity. The teacher will assess learners in groups using various tools such as an observation schedule, checklist or rating scale or any other appropriate tool.

APPENDIX II: LIST OF ASSESSMENT METHODS, LEARNING RESOURCES AND SUGGSTED ASSESSMENT METHODS

Strand	Suggested Assessment Methods	Suggested Learning Resources	Suggested Non-formal Activities
Conservation of Resources	-Observation of learning -Tests (written and oral) -Project	-Suitable organic materials for composting such as slashed vegetation, kitchen wastes and animal wastes, digging tools such as jembes and spade, metal pipes, plastic pipes, assorted containers such bottles, buckets and Jerri cans, mulching materials such as dry grass, suitable cover crop, Stakes for erecting shade, Charts, pictures and video clips, cooking pans and pots suitable materials for making a scare crow such as sticks or pieces of timber, nails, threads and wires, stuffing materials and old clothes, wild animal repellants such as smoke and smelly substances, resource person, materials for controlling soil erosion such as stones, wire mesh, poles, twigs. materials for making physical	<ul style="list-style-type: none"> • Collect suitable composting materials from the environment, • Visit gardens in the neighbourhood to observe water conservation measure and integrated farming. • Learners to initiate soil conservation measures in the school based on common forms of erosion in the environment. • Learners to initiate water harvesting and conservation based on common form of water wastage points in the school. • Learners to initiate bird feeding table to attract and nourish wild birds using waste foods. • Learners debate on advantages and disadvantages of fuels. • Making exhibitions of fuel saving energy cookers, improvised baking ovens,

		deterrents such as innovation lights, deflectors, safe traps.	simple hand washing facilities, deterrents
Food Production Processes	Observation of learning -Tests (written and oral) -Project	Container or ground gardens/open spaces for gardening, tiny seeds such as carrots and millet, garden tools and equipment such as pangas, jembes and forked jembes, watering cans, charts, photographs or video clips on domestic animals, pictures, video clips, different types of foodstuffs, kitchen tools and equipment (cooking pans and pots, chopping boards, kitchen knife, wooden spoon, frying spoon), suitable frying equipment and materials, source of heat, resource person. Suitable vegetable seeds in the locality, assorted cereals and pulses, natural preservatives such as ash, air tight containers, small domestic animal such as rabbit or guinea pig, improvised feeders and waterers, housing structure for the small domestic animals, variety of fruits and vegetables, drying rack,	<ul style="list-style-type: none"> • Participate in 4k clubs, ASK shows and famer’s days • Learners make presentations in assemblies and open days on benefits of eating organically grown foods. • Learners create talking walls on various themes to educate the community • Create journals and logs on healthy eating habits. • Peer teach other on use and care of kitchen equipment.

		netting materials, improvised baking equipment,	
Hygiene Practices	Observation of learning -Tests (written and oral) -Project	Hand washing materials and equipment, variety of PPEs (gloves, masks, gumboots, head gear, overall,), Cleaning materials and equipment such as buckets/basin, brooms, brushes, floor clothes, detergent and clean water, canvas shoes, resource person, pictures or videos on ways good grooming, different surfaces in the home environment such as cemented, tiled, earthen and wooden) fast and white coloured items, clothe lines, pegs. Stain removal agents	<ul style="list-style-type: none"> • Learners draw posters on washing of hands. • Learners make leaky tins of tippy taps for washing hands and place them in the different types of the school compound. • Compose and sing <i>Usafi</i> songs and poems on good grooming.
Production Techniques	Observation of learning -Tests (written and oral) -Project	Needle work tools such as needles, crocheting hooks, scissors, tape measures, sewing thread, yarn, dress maker pins, fabric, pin cushion, thimbles., sacks, plastic bottles, walls , wooden frames, topsoil, manures, poles, plastic sheet, offcuts/timber, top soil, manures,	<ul style="list-style-type: none"> • Use clubs to sensitize the school community on repair of garments. • Sensitize learners in health clubs on stain removal. • Draw pictures of different needle work tools. • Carry out an exhibition to display crotched items.