



REPUBLIC OF KENYA
MINISTRY OF EDUCATION

JUNIOR SECONDARY SCHOOL CURRICULUM DESIGN

**AGRICULTURE FOR LEARNERS WITH
PHYSICAL IMPAIRMENT**

GRADE 7



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

First Published in 2022

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FOREWORD

Curriculum is a tool which a country employs to empower its citizens. The Kenya Institute of Curriculum Development in meeting its core mandate '*to develop curriculum and curriculum support materials*' has spearheaded curriculum reforms in the education sector. The reforms are based on rigorous research, monitoring and evaluation activities conducted on the 8-4-4 system of education to inform the Competency-Based Curriculum through a phase-in phase-out model. The reforms were informed by the Summative Evaluation Survey (2009), Needs Assessment Study (2016) and the Task Force Report on Re-alignment of Education Sector (2012), 21st century learning and approaches, the East Africa Protocol on harmonization of education, among many others.

The curriculum reforms aim at meeting the needs of the Kenyan society by aligning the curriculum to the Constitution of Kenya 2010, the Kenya Vision 2030 and the East African Protocol, among other policy requirements as documented by the Sessional Paper No. 1 of 2019 on 'Reforming Education and Training in Kenya for Sustainable Development'. The reforms adopted the Competency-Based Curriculum (CBC) to achieve development of requisite knowledge, skills, values and attitudes that will drive the country's future generations as documented by the Basic Education Curriculum Framework (BECF). Towards achieving the mission of the Basic Education, the Ministry of Education has successfully and progressively rolled out curriculum implementation for Early Years Education, Grades 4 and 5. The roll out for Grade 6 and Junior Secondary (Grade 7-9) will subsequently follow.

It is my hope that the curriculum designs for learners with physical impairment in Grade 7 will guide the teachers, among other educational stakeholders, for progressive achievement of the curriculum vision which seeks to have engaged, empowered and ethical citizens.

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PREFACE

The Government of Kenya embarked on the national implementation of the Competency Based Curriculum in January, 2019 for Early Years Education (Pre-Primary 1 and 2, and Lower Primary Grade 1, 2 and 3). The implementation progressed to Upper Primary (Grade 4, 5 and 6) based on the reorganization of the Basic Education structure. Grade 7 curriculum furthers implementation of the Competency-Based Curriculum to Junior Secondary education level. This level marks the zenith of Middle School education whose main feature is to offer a broad opportunity for the learner to explore talents, interests and abilities before selection of pathways and tracks in Senior Secondary education level.

The Grade 7 curriculum designs for learners with physical impairment in the respective learning areas will enable the development of 21st Century competencies. Ultimately, this will lead to the realization of the vision and mission of the Competency-Based Curriculum as documented in the Basic Education Curriculum Framework (KICD, 2017).

It is my hope that all Government agencies among other stakeholders in education will use the designs to guide effective and efficient implementation of the learning activities as well as provide relevant feedback on various aspects of the curriculum. Successful implementation of the Grade 7 curriculum for learners with physical impairment will be a significant milestone towards realization of the curriculum mission ‘Nurturing Every Learner’s Potential’.

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ACKNOWLEDGEMENT

The Kenya Institute of Curriculum Development (KICD) Act Number 4 of 2013 (Revised 2019) mandates the Institute to develop curricula and curriculum support materials for basic and tertiary education and training, below the university. The curriculum development process for any level involves thorough research, international benchmarking, and robust stakeholder engagement. Through this systematic and consultative process, KICD conceptualized the Competency Based Curriculum (CBC) as captured in the Basic Education Curriculum Framework (BECF). The CBC responds to the demands of the 21st Century and the aspirations captured in the Constitution of Kenya 2010, Kenya Vision 2030, East African Commission Protocol and the United Nations Sustainable Development Goals.

The Kenya Institute of Curriculum Development has developed the Grade 7 curriculum designs taking cognizance of the tenets of the CBC, key among them being the need to ensure that learners are provided with learning experiences that call for higher order thinking, thereby ensuring they become engaged, empowered and ethical citizens as articulated in the BECF Vision. The Grade 7 designs also provide opportunities for learners to develop the core competencies as well as engage in Community Service Learning. The designs present assessment rubric linked to sub strands in the individual subjects. Teachers are encouraged to use varied assessment tools when assessing learners.

KICD obtains its funding from the Government of Kenya to enable the achievement of its mandate and implementation of the Government and Sector (Ministry of Education (MoE) plans. The Institute also receives support from development partners targeting specific programmers. The Grade 7 curriculum designs have been developed with the support of the World Bank through the Kenya Secondary Education Quality Improvement Program (SEQIP) commissioned by the MoE. The Institute is grateful for the support accorded to the process by the Government of Kenya, through the MoE and the development partners for the policy, resource, and logistical support.

I acknowledge the KICD curriculum developers and other staff, teachers and all the educators who participated, as panelists, in the development of the designs. I also appreciate the contribution of the Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders for their various roles in the development of the Grade 7 curriculum designs.

My special thanks to the Cabinet Secretary, Ministry of Education; the Principal Secretary State Department of Early Learning and Basic Education; the Secretary, Teachers' Service Commission (TSC) and the Chief Executive Officer, Kenya National Examinations Council (KNEC) for their support in the process. Finally, I am grateful to the KICD Governing Council for their consistent guidance during the development of the curriculum designs. The Institute assures all curriculum implementers, parents, and other stakeholders that the designs will ensure effective implementation of the CBC at Grade 7.

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TIME ALLOCATION

	Subject	Number of Lessons Per Week (40 minutes per lesson)
1.	English	5
2.	Kiswahili/KSL	4
3.	Mathematics	5
4.	Integrated Science	4
5.	Health Education	2
6.	Pre-Technical studies	4
7.	Social Studies	3
8.	Religious Education (CRE/IRE/HRE)	3
9.	Business Studies	3
10.	Agriculture	3
11.	Life Skills Education	1
12.	Physical Education and sports	2
13.	Optional Subject	3
14.	Optional Subject	3
	Total	45

NATIONAL GOALS OF EDUCATION

Education in Kenya should:

i) Foster nationalism and patriotism and promote national unity.

Kenya's people belong to different communities, races and religions, but these differences need not divide them. They must be able to live and interact as Kenyans. It is a paramount duty of education to help young people acquire this sense of nationhood by removing conflicts and promoting positive attitudes of mutual respect which enable them to live together in harmony and foster patriotism in order to make a positive contribution to the life of the nation.

ii) Promote the social, economic, technological and industrial needs for national development.

Education should prepare the youth of the country to play an effective and productive role in the life of the nation.

a) Social Needs

Education in Kenya must prepare children for changes in attitudes and relationships which are necessary for the smooth progress of a rapidly developing modern economy. There is bound to be a silent social revolution following in the wake of rapid modernization. Education should assist our youth to adapt to this change.

b) Economic Needs

Education in Kenya should produce citizens with the skills, knowledge, expertise and personal qualities that are required to support a growing economy. Kenya is building up a modern and independent economy which is in need of an adequate and relevant domestic workforce.

c) Technological and Industrial Needs

Education in Kenya should provide learners with the necessary skills and attitudes for industrial development. Kenya recognizes the rapid industrial and technological changes taking place, especially in the developed world. We can only be part of this development if our education system is deliberately focused on the knowledge, skills and attitudes that will prepare our young people for these changing global trends.

iii) Promote individual development and self-fulfillment

Education should provide opportunities for the fullest development of individual talents and personality. It should help children to develop their potential interests and abilities. A vital aspect of individual development is the building of character.

iv) Promote sound moral and religious values.

Education should provide for the development of knowledge, skills and attitudes that will enhance the acquisition of sound moral values and help children to grow up into self-disciplined, self-reliant and integrated citizens.

- v) **Promote social equality and responsibility.**
Education should promote social equality and foster a sense of social responsibility within an education system which provides equal educational opportunities for all. It should give all children varied and challenging opportunities for collective activities and corporate social service irrespective of gender, ability or geographical environment.

- vi) **Promote respect for and development of Kenya's rich and varied cultures.**
Education should instill in the youth of Kenya an understanding of past and present cultures and their valid place in contemporary society. Children should be able to blend the best of traditional values with the changing requirements that must follow rapid development in order to build a stable and modern society.

- vii) **Promote international consciousness and foster positive attitudes towards other nations.**
Kenya is part of the international community. It is part of the complicated and interdependent network of peoples and nations. Education should therefore lead the youth of the country to accept membership of this international community with all the obligations and responsibilities, rights and benefits that this membership entails.

- viii) **Promote positive attitudes towards good health and environmental protection.**
Education should inculcate in young people the value of good health in order for them to avoid indulging in activities that will lead to physical or mental ill health. It should foster positive attitudes towards environmental development and conservation. It should lead the youth of Kenya to appreciate the need for a healthy environment.

LEARNING OUTCOMES FOR MIDDLE SCHOOL

By end of Middle School, the learner should be able to:

1. Apply literacy, numeracy and logical thinking skills for appropriate self-expression.
2. Communicate effectively, verbally and non-verbally, in diverse contexts.
3. Demonstrate social skills, spiritual and moral values for peaceful co-existence.
4. Explore, manipulate, manage and conserve the environment effectively for learning and sustainable development.
5. Practice relevant hygiene, sanitation and nutrition skills to promote health.
6. Demonstrate ethical behavior and exhibit good citizenship as a civic responsibility.
7. Appreciate the country's rich and diverse cultural heritage for harmonious co-existence.
8. Manage pertinent and contemporary issues in society effectively.
9. Apply digital literacy skills for communication and learning.

ESSENCE STATEMENT

Kenya Vision 2030 recognizes Agriculture as a core factor to development of the country's economy. The vision resonates with the United Nations Sustainable Development Goal No. 2 which aims *to end hunger, achieve food security, improve nutrition and promote sustainable agriculture*. The vision is further aligned to the Comprehensive Africa Agriculture Development Programme (CAADP) which aim to achieve sustainable food production systems through resilient agricultural practices for food security and nutrition. This therefore calls for education that develops agricultural competencies to provide competent manpower for Kenya's agro-based economy.

Agriculture for Junior Secondary level will build on competencies introduced in Upper Primary curriculum contributing to human capacity development. The learning experiences will involve active learner participation conducted through practical, project and Community Service Learning (CSL) activities to develop applicable competencies for sustainable agriculture. The curriculum will focus on developing knowledge, skills and attitudes for conservation of agricultural environment, crop production, and animal production through innovative agricultural technologies using limited resources to enhance food security. The acquired knowledge, skills and attitudes will form a broad-spectrum foundation for development of agricultural competencies for senior school and beyond.

SUBJECT GENERAL LEARNING OUTCOMES

By the end of Junior Secondary School, the learner should be able to:

1. Participate actively in activities for conservation of agricultural environment.
2. Use scarce agricultural resources through innovative practices to contribute towards health, nutrition and food security.
3. Grow crops and rear animals as profitable agricultural enterprises through sustainable and ethical practices for self-reliance and economic development.
4. Apply existing and emerging technology in agriculture, digital and media resources to enhance sustainable agricultural practices.
5. Appreciate agriculture as a worthy niche for hobby, career development, further education and training.

STRAND 1.0: CONSERVING AGRICULTURAL ENVIRONMENT

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
<p>1.0 Conserving Agricultural Environment</p>	<p>1.1 Soil pollution control</p> <p>(6 lessons)</p>	<p>By the end of the sub strand the learner should be able to:</p> <p>a) examine the causes of soil pollution in farming</p> <p>b) explore the control of soil pollution in agricultural environment</p> <p>c) demonstrate safe farming practices to prevent soil pollution</p> <p>d) demonstrate responsibility in using safe farming practices to conserve soil.</p>	<p>Learner is guided <i>individually, purposive pairs or in groups to:</i></p> <ul style="list-style-type: none"> • Form groups, find out, discuss and <i>share in class</i> causes of soil pollution in farming such as excessive use of artificial fertilizers, agricultural chemicals and plastic wastes. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board or text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views. (This adaptation is applicable where speech difficulties are involved in this sub strand.)</i> • Search and watch a video clip on causes of soil pollution. <i>Learners with manipulation difficulties could be provided with adapted digital resources with appropriate accessibility features or be supported by peers, learner support assistant or teacher to manipulate the digital resources. As they watch, learners with short stature could require preferential sitting for better or enhanced view. The learner with postural difficulties could require appropriate positioning. Light intensity to be controlled for learners with epilepsy and those with visual impairment to suit their individual</i> 	<p>1. How do farming practices cause soil pollution?</p> <p>2. How can we control soil pollution through agricultural practices?</p>

			<p><i>needs (This adaptation is applicable where manipulation and digital activities are involved).</i></p> <ul style="list-style-type: none"> • Engage in safe soil pollution control practices such as safe disposal of used chemical containers and plastic wastes. <i>Learners using mobility devices could be supported by peers, learner support assistant or teacher to enable them participate in this learning experience. Care should be taken to ensure learners with allergic conditions such as asthma are not exposed to conditions that may trigger allergic reactions during the activity. (This adaptation is applicable where mobility difficulties and health challenges are involved in this sub strand.)</i> • Create awareness messages against dumping of soil pollutants, safe disposal of used chemical containers and plastic wastes and use of correct types and amounts of farm chemicals and fertilizers. <i>Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive technology or be provided with adapted writing resources such as heavy gauge writing papers, book holders, pen/pencil grips, weighted pencils, slant boards, rulers, page turners and universal cuffs to create awareness messages. They could also be supported by peers, learner support assistant or teacher.</i> 	
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Core competencies to be developed:

- **Citizenship:** learners create awareness in the community to ensure safe disposal of agricultural wastes for clean environment.
- **Critical thinking and problem solving:** as learners determine causes of soil pollution and their control.
- **Communication and collaboration:** as learners work in group activities of sharing soil pollution and control experiences

<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Environmental protection and conservation as learners create awareness in the community against dumping of agricultural wastes. • Analytical thinking as learners conserve soil by controlling soil erosion. 	<p>Values:</p> <ul style="list-style-type: none"> • Responsibility will be promoted as learners promote safe farming practices to conserve the soil. • Unity will be enhanced as learners work in group activities. • Respect will be promoted as learners appreciate the opinion of each other during discussions and presentations.
<p>Link to other subjects:</p> <ul style="list-style-type: none"> • Integrated science in relating environmental pollutants to soil pollution. • Science and technology as learners are engaged in safe disposal of chemical containers. • Social studies as learners conserve the environment by controlling soil pollution. 	
<p>Non formal Activities to support Learning:</p> <ul style="list-style-type: none"> • Learners to initiate campaigns in school to sensitize school community members on protecting soil from pollution. • Learners initiate activities to control soil pollution in Young Farmers Club activities. 	<p>Suggested Modes of Assessment</p> <ul style="list-style-type: none"> • Written assignments • Observation • Project
<p>Suggested Learning Resources: Relevant video clips, manilla papers and marker pens, heavy gauge writing papers, book holders, pen/pencil grips, weighted pencils, slant boards, rulers, page turners and universal cuffs, adapted digital devices with relevant software/ hardware such as multipurpose communication board, multipurpose stamp and ink.</p> <p>Related service providers: physiotherapist, learner support assistant, occupational therapist, speech therapists.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Examining the causes of soil pollution in farming.	Analyses the causes of soil pollution in farming.	Examines the causes of soil pollution in farming.	Outlines causes of soil pollution in farming.	States the causes of soil pollution in farming.
Exploring the control of soil pollution in agricultural environment.	Examines the control of soil pollution in agricultural environment.	Explores the control of soil pollution in agricultural environment.	Outlines controls of soil pollution in agricultural environment.	States control of soil pollution in agricultural environment.
Demonstrating safe farming	Illustrates safe farming	Demonstrates safe farming	Outlines safe farming	Mentions safe farming

practices to prevent soil pollution.	practices to prevent soil pollution.	practices to prevent soil pollution.	practices to prevent soil pollution.	practices to prevent soil pollution.
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Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving Agricultural Environment	1.2 Water conservation measures (9 lessons)	By the end of the sub strand the learner should be able to: a) explore the importance of water conservation in farming b) construct water retention structures to conserve surface runoff c) demonstrate use of minimum tillage practices to conserve water in farming d) apply water conservation measures in agricultural environment.	Learner is guided <i>individually, in purposive pairs or groups</i> to: <ul style="list-style-type: none"> Work in pairs to discuss and share in class the importance of water conservation in farming (such importance to include making water available longer after the rains). <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views. (This adaptation is applicable where speech difficulties are involved in this sub strand).</i> Discuss ways of conserving surface runoff to prevent damage of property and collect it in structures such as <i>water retention ditches, earth basins and water retention pits.</i> <i>In purposive pairs learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive technology during the collection of water. Learners with mobility difficulties could be given physical assistance or ensure barrier free access to enable them</i>	<ol style="list-style-type: none"> How can we conserve surface runoff for farming? How can we practice minimum tillage to conserve soil moisture?

			<p><i>participate in this learning experience. Care should be taken to ensure learners with allergic conditions such as asthma are not exposed to conditions that may trigger allergic reactions during the activity. (This adaptation is applicable where manipulation, mobility difficulties and health challenges are involved in this sub strand.)</i></p> <ul style="list-style-type: none"> • Search for information on minimum tillage practices for water conservation in farming; to include practices such as slashing weeds, restricted cultivation and mulching. <i>In purposive pairs learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive technology during the search.</i> • Take an excursion to evaluate community farming activities for water conservation. <p>Project: <i>In groups, learners to construct structures for water conservation such as water retention ditches, earth basins and retention pits, then plant a crop such as bananas, sugarcane, Napier grass and arrowroots.</i></p>	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: researching skills as learners observe, analyses available information on water conservation challenges in agricultural environment and problems (problem area in the environment), design and construct appropriate runoff retention structures to solve the challenge. • Communication and collaboration: learners work in group activities in exploring the importance of water conservation in farming. • Learning to learn: Learners searches information on minimum tillage practices for water conservation in farming. 				
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Environmental protection and conservation in construction of retention ditches and retention pits for water conservation in the local environment. 			<p>Values:</p> <ul style="list-style-type: none"> • Unity will be enhanced in group initiative when constructing water retention ditches and pits. • Responsibility will be promoted as learners engage in activities that 	

	<p>enhance water conservation.</p> <ul style="list-style-type: none"> • Love will be promoted as learners share information on water conservation measures carried out in their local environment.
<p>Link to other Subjects:</p> <ul style="list-style-type: none"> • Integrated science as the learners use tools, equipment and technology to construct water conservation structures. • Religious education as learners appreciate God's creativity in forming rain and growth of vegetation. 	
<p>Non formal Activities to support Learning:</p> <ul style="list-style-type: none"> • Learners initiate water harvesting and conservation measures against runoffs in or near the school. 	<p>Suggested Modes of Assessment</p> <ul style="list-style-type: none"> • Observation • project portfolio • Oral and written assessments
<p>Suggested Learning Resources: Adapted garden tools such as jembes, fork jembes, spade, panga, slasher, multipurpose communication board, multipurpose stamp and ink, adapted digital resources. Others: mulch materials, Related service providers: Learner support assistant, physiotherapist, occupational therapist.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Exploring the importance of water conservation in farming.	Analyses the importance of water conservation in farming.	Explores the importance of water conservation in farming.	Outlines the importance of water conservation in farming.	Lists the importance of water conservation in farming.
Constructing water retention structures to conserve surface runoff.	Designs water retention structures to conserve surface runoff.	Constructs water retention structures to conserve surface runoff.	Describes water retention structures to conserve surface runoff.	Mentions water retention structures to conserve surface runoff.
Demonstrate the use of minimum tillage practices for water conservation in farming.	Explores the use of minimum tillage practices for water conservation in farming.	Demonstrates the use of minimum tillage practices for water conservation in farming.	Outlines the use of minimum tillage practices for water conservation in farming.	Recalls the use of minimum tillage practices for water conservation in farming.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving Agricultural Environment	1.3 Agroforestry (9 lessons)	<p>By the end of the sub strand the learner should be able to:</p> <ol style="list-style-type: none"> explore the meaning of agroforestry in conserving the environment describe the importance of agro-forestry in conserving the environment examine the characteristics of agro-forestry trees for conservation of the environment choose appropriate agroforestry trees for conserving environment, establish agroforestry trees for conservation of the environment embrace the use of agroforestry in conserving the environment. 	<p>Learner is guided <i>individually, in purposive pairs or groups</i> to:</p> <ul style="list-style-type: none"> Work in pairs to discuss and share in class their understanding of the term agro-forestry. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views. (This adaptation is applicable where speech difficulties are involved in this sub strand).</i> Work in groups to search for information on importance of agro-forestry using digital and print resources and make presentation in class. <i>Learners with manipulation difficulties could be provided with adapted digital resources with appropriate accessibility features or be supported by peers, learner support assistant or teacher to manipulate the digital resources. (This adaptation is applicable where manipulation and digital activities are involved in this sub strand).</i> Take a field excursion to observe the uses of various trees as grown in crop and pasture fields. <i>During the field excursion learners</i> 	<ol style="list-style-type: none"> Why should we practice agroforestry? How do agroforestry trees conserve environment? How can we identify an agroforestry tree?

			<p><i>with mobility difficulties should use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher while those with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks.</i></p> <p><i>Safety precaution should be observed for learners with asthma against triggers like cold and dust, those with hemophilia to be protected from sharp objects, those with brittle bones to be given light activities. (This adaptation is applicable where mobility and manipulation difficulties are involved in this sub strand).</i></p> <ul style="list-style-type: none"> • Watch a video clip on agroforestry trees as used in crops and pasture fields. <p><i>As they watch learners with short stature could require preferential sitting for better or enhanced view. The learner with postural difficulties could require appropriate positioning. Light intensity to be controlled for learners with epilepsy and those with visual impairment to suit their individual needs. (Apply this adaptation in all subsequent activities that involve use of digital devices in this sub strand)</i></p> <ul style="list-style-type: none"> • Make presentations on characteristics of a good agroforestry tree such as ability to grow alongside crops, fast growing, and multiple uses. • Explore the environment and choose 	
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			<p>agroforestry trees that can provide planting material for establishing agroforestry.</p> <p><i>Project: As a class, learners to establish and manage at least one agroforestry tree in the school compound and prepare a schedule of responsibilities to take care of the tree until it are fully established.</i></p>	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Self-efficacy: leadership skills as learner set goals, assign and execute tasks in the agroforestry class project. • Communication and collaboration as learner’s patriciate in the project of planting trees. • Digital literacy as learners use digital devices to access information on Agroforestry trees. 				
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Environmental awareness, protection and conservation in establishing agroforestry trees to conserve and improve the environment within the school. • Social cohesion will be developed as the learners work in groups and interact, consult and conduct the practical activities of establishing a selected tree. 		<p>Values:</p> <ul style="list-style-type: none"> • Responsibility will be enhanced while caring for the class project until the planted agroforestry trees are fully established. • Unity will be promoted through collaborating in the project activity of planting trees. • Respect will be enhanced as learners take turns in group activities. • Love will be promoted as learners embrace each other’s view in group discussions. 		
<p>Link to other subjects:</p> <p>Social studies: learners expound their knowledge and skills in environmental conservation through agroforestry.</p> <p>Science and technology: learners use digital devices in searching for information on Agroforestry.</p>				
<p>Non-Formal Activities to support Learning:</p> <p>Learners to initiate one tree project in or near the school.</p>		<p>Suggested Modes of Assessment</p> <ul style="list-style-type: none"> • Observation • Written assessment • Project portfolio 		
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> • video clips, adapted garden tools such as jembes, fork jembes, spade, panga, slasher <p>Adapted print materials, photos, multipurpose communication board, adapted digital devices, speech synthesizers, speech to text software/hardware.</p>				

Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.				
Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Describing the importance of agroforestry in conserving the environment.	Explores the importance of agroforestry in conserving the environment.	Describes the importance of agroforestry in conserving the environment.	Outlines the importance of agroforestry in conserving the environment.	States the importance of agroforestry in conserving the environment.
Choosing appropriate agroforestry trees for conserving the environment.	Explores appropriate agroforestry trees for conserving the environment.	Chooses appropriate agroforestry trees for conserving the environment.	Identifies appropriate agroforestry trees for conserving the environment.	Mentions appropriate agroforestry trees for conserving the environment.
Establishing agroforestry trees for conservation of environment.	Analyses activities in establishing agroforestry trees for conservation of environment.	Establishes agroforestry trees for conservation of environment.	Outlines activities in establishing agroforestry trees for conservation of environment.	Lists activities in establishing agroforestry trees for conservation of environment.

STRAND 2.0: CROP PRODUCTION

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
2.0 Crop Production	2.1 Preparation of planting site (7 lessons)	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> a) explore planting site for crops in the school environment b) examine planting site in relation to planting material c) prepare site for establishing selected planting material d) show responsibility in preparing site for selected planting material. 	<p>Learner is guided <i>individually, purposive pairs or groups</i> to:</p> <ul style="list-style-type: none"> • Take excursion in the school compound to identify suitable sites for planting crops. The sites to include <i>ground sites, container sites, on walls, along the fence or along the driveways. During the field excursion learners with mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher while those with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks.</i> Safety precaution should be observed for learners with asthma against triggers like cold and dust, those with hemophilia to be protected from sharp objects, those with brittle bones to be given light activities. (Apply this adaptation in all subsequent activities which involve mobility, manipulation and safety under this sub strand). • Observe provided planting materials and suggest appropriate preparation of their planting sites. The suggestions to include fine <i>tilth for small seeds, medium tilth for medium sized seeds, coarse tilth for large planting materials like tubers, suckers and cuttings.</i> 	<ol style="list-style-type: none"> 1. How can we prepare different types of planting sites? 2. How does planting material determine planting site preparation?

			<p><i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views. (This adaptation is applicable where speech difficulties are involved in this sub strand).</i></p> <ul style="list-style-type: none"> • Prepare suitable sites for establishing selected planting materials on the identified areas. The sites to include <i>selected containers and ground seedbeds.</i> <p>Practical activity: <i>As a class, learners to prepare a suitable planting site in readiness for establishing a crop of their choice.</i></p>	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: evaluation and decision-making skill as the learners explore the school compound, identify and prepare a suitable planting site for a given planting material. • Learning to learn as learners prepare suitable planting sites for crop establishment. • Communication and collaboration as learner’s participate in the project preparation of planting materials. 				
<p>Pertinent and Contemporary Issues (PCIs): Safety of self and others as the learners observe and practice personal safety and safety of others while working with tools and equipment in preparing planting sites. Environmental issues in education: as learners prepare planting sites for establishing a crop.</p>			<p>Values:</p> <ul style="list-style-type: none"> • Unity will be enhanced as learners discuss and work in groups in the activity tasks for identifying and preparing planting sites • Responsibility will be promoted as learners share tasks in groups and individualized activity on preparing planting sites. • Love will be enhanced as learners share materials for preparing planting sites. 	
<p>Link to other Subjects: Pre-Technical Studies as learners work with various tools and equipment in preparing planting sites. Science and technology as learners use technology to water the established selected planting material.</p>				

Social studies as learners learn to conserve soil and water during the establishment of the selected planting material.	
Non-formal Activities to support Learning: Learners to initiate display sites/ crop museum in or near the school. Learners to initiate the preparation of a suitable planting site in readiness for establishing a crop of their choice through Young Farmers Club.	Suggested modes of Assessment: <ul style="list-style-type: none"> • Graded observation • Project work • Written and oral assessment
Suggested Learning Resources: Sample of seeds of various sizes, adapted suitable containers, manure, adapted garden tools and equipment such as jembes, pangas and slashers, multipurpose communication boards.	
Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Exploring planting sites for establishing crops in the school environment.	Distinguishes sites for planting crops in the school environment.	Explores sites for planting crops in the school environment.	Outlines sites for planting crops in the school environment.	Mentions sites for planting crops in the school environment.
Examining planting site in relation to planting material.	Differentiates planting sites in relation to the planting material.	Examines planting site in relation to the planting the material.	Classifies planting site in relation to some planting material.	Mentions planting site in relation to some planting material.
Preparing site for establishing selected planting material	Analyses sites for establishing selected planting material.	Prepares site for establishing selected planting material.	Describes sites for establishing selected planting material.	Lists sites for establishing selected planting material.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
2.0 Crop Production	2.2 Crop establishment (7 lessons)	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> a) categorize planting materials used for establishing various crops b) select suitable planting materials for crop establishment c) describe the methods of planting various crop materials d) determine appropriate time of planting different types of propagation materials e) predict appropriate time of planting using digital information centres f) establish a selected planting material in a planting site. 	<p>Learner is guided <i>individually, purposive pairs or groups</i> to:</p> <ul style="list-style-type: none"> • Search for information on types of planting materials, collect and categorize planting materials either as seeds or vegetative materials and present in class. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views. Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks or give instructions to a peer, learner support assistant or teacher to perform given tasks under their instructions. Learners with mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher during the activity. Safety precaution should be observed for learners with epilepsy and asthma against triggers such as water, dust and cold (This adaptation is applicable where speech, manipulation, mobility and safety precautions are required in this sub strand).</i> • Analyze and select from provided samples of planting materials such as <i>overgrown woody</i> 	<ol style="list-style-type: none"> 1. How can planting materials be selected? 2. How can selected planting materials be established?

			<p><i>cuttings, middle woody cuttings, young immature cuttings, mature seeds of different sizes, damaged seeds, wrinkled seeds, chemically treated seeds, and young immature seeds.</i></p> <ul style="list-style-type: none"> • Discuss and make presentations on how different materials are planted in a seedbed using methods such as <i>dibbling, drilling and broadcasting.</i> • Discuss and make presentations on factors determining appropriate time of planting such as <i>soil moisture, onset of rain, timed market, staggered planting and time of harvesting.</i> • Search for information using digital devices, digital apps and corporate websites on expected time for onset of the rain to predict time of planting. Learners with manipulation difficulties could be provided with adapted digital resources with appropriate accessibility features or be supported by peers, learner support assistant or teacher to manipulate the digital resources. <p><i>Practical activity:</i> <i>As a class, learners to establish a crop of their choice on the site prepared in the previous sub strand (Preparation of planting site) and take care of the crop after germination.</i></p>	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Learning to learn: researching skills as learners engage in searching and discovery learning process in searching for information, categorizing planting materials, analyzing materials for planting, conducting practical activities and making observations on germination and growth of selected crops. • Digital literacy: connecting and interacting skills as learners use digital devices, select appropriate websites and application software to search for information for predicting time of planting. • Communication and collaboration as learners share activities during preparation of planting site. • Self-efficacy as learners shares their views in group discussions. 				

<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Social cohesion will be developed as the learners work in groups and interact, consult and conduct the practical activities of establishing a selected crop. • Environmental issues in Education: as learners establish a crop of their choice in the site prepared previously. 	<p>Values:</p> <ul style="list-style-type: none"> • Unity will be promoted while working in teams to conduct practical activities and class presentations on establishing a crop from planting materials. • Responsibility will be promoted as learners take care of their crops. • Love will be promoted as learners share materials during planting of the crop.
<p>Link to Other Subjects:</p> <ul style="list-style-type: none"> • Integrated science as learners applies scientific concepts of germination and viability of planting materials. • Computer science: as learners use digital devices to search for information. • Social studies: as learners learn to conserve soil and water during the establishment of the crop. 	
<p>Non-formal Activities to support Learning: Learners to initiate display sites/ crop museum in or near the school. Learners to plant crop of their choice in Young Farmers Club</p>	<p>Suggested modes of Assessment:</p> <ul style="list-style-type: none"> • Written tests • Graded observation • Project portfolio
<p>Suggested Learning Resources: Samples of seeds and vegetative planting materials, digital devices and related accessories, such as multipurpose communication board, adapted garden tools and equipment such as hoes, panga, planting line and tape measure. Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Categorizing planting materials used for establishing various crops.	Examines planting materials used for establishing various crops.	Categorizes planting materials used for establishing various crops.	Describes planting materials used for establishing various crops.	Lists planting materials used for establishing various crops.
Selecting suitable planting materials for crop establishment.	Analyses suitable planting materials for crop establishment.	Selects suitable planting materials for crop establishment.	Classifies suitable planting materials for crop establishment	Names suitable planting materials for crop establishment.
Describing methods of planting various crop	Analyses methods of planting various crop	Describes the methods of planting various crop	Outlines the methods of planting various crop	States the methods of planting various crop

materials on a seedbed.	materials on a seedbed.	materials on a seedbed.	materials on a seedbed.	materials on a seedbed.
Determining appropriate time of planting different types of propagation materials.	Explores appropriate time of planting different types of propagation materials.	Determines appropriate time of planting different types of propagation materials.	Explains appropriate time of planting different types of propagation materials.	Mentions appropriate time of planting different types of propagation materials.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
2.0 Crop Production	2.3 Crop Management (9 lessons)	By the end of the sub strand the learner should be able to: a) differentiate between a weed and a crop in a cultivated field b) carry out weeding using physical methods c) carry out earthing up for a suitable crop d) carry out thinning and gapping for optimum plant spacing e) carry out hardening on a suitable crop f) appreciate importance of various management practices in crop production.	Learner is guided <i>individually, purposive pairs, in groups</i> to: <ul style="list-style-type: none"> Take an excursion to a field with growing crops, observe and differentiate weeds from crops. <i>Learners with mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher during the excursion. Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks or give instructions to a peer, learner support assistant or teacher to perform given tasks under their instructions. Safety precaution should be observed for learners with epilepsy and asthma against triggers such as water, dust and cold (This adaptation is applicable where mobility, manipulation difficulties and safety precautions are involved in this sub strand).</i> Use digital devices to take photos of various weeds, compile and make class 	1. What management practices should be used? 2. Why is it important to carry out crop management? 3. How can we carry out management practices?

			<p>presentations about the compiled work. As <i>they search for information regulate the screen resolution (light intensity/glare) on digital devices for learners with epilepsy and those with visual difficulties. Learners with manipulation and mobility difficulties could be purposively grouped during this activity (Apply this adaptation where manipulation and mobility difficulties are involved in this sub strand).</i></p> <ul style="list-style-type: none"> • Carry out weeding on a selected crop using physical methods such as uprooting weeds, tilling and slashing. • Observe the germinated crop, carry out thinning and use the thinned-out plants to gap the wide spaces. • Carry out earthing up for a suitable crop. • Carry out hardening on a suitable crop. • Discuss the importance of management practices carried out in crop production. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views.</i> <p>Practical activity: <i>As a class, learners to carry out management practices (at the opportune time) on a crop of their choice.</i></p>	
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<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Digital literacy: designing and creating skills as learners take photos of weeds, compile the photos and use digital devices to make class presentations. • Communication and collaboration: learners share activities during the practical activity on carrying out management practices on a crop. • Learning to learn: Learners conduct practical activity in groups as they carry out management practices on a crop of their choice. 				
<p>Pertinent and Contemporary Issues (PCIs) Life skills: Planning and decision-making skills as the learner’s plan and commit themselves to carry out tasks in management practices during practical lesson activities. Social cohesion: Learners work in groups as they carry out management practices on a crop.</p>		<p>Values:</p> <ul style="list-style-type: none"> • Unity will be promoted as learners work in groups during the practical activity. • Love and respect will be enhanced as learners carry out group activities. 		
<p>Link to other subjects: Social studies as learners relate various management practices of selected crops to the elements of weather in their locality. Integrated science as learners use tools and equipment’s to carry out management practices.</p>				
<p>Non-formal Activities to support Learning: Learners to initiate display sites/ crop museum in or near the school.</p>		<p>Suggested Modes of Assessment</p> <ul style="list-style-type: none"> • Written tests • Graded observations • Project portfolio • Project report 		
<p>Suggested Learning Resources: Adapted digital devices, adapted garden tools and equipment Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.</p>				
<p>Suggested assessment Rubric</p>				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Carrying out weeding using physical methods.	Critiques the physical methods of weeding.	Carries out weeding using physical methods.	Describes the physical methods of weeding.	Mentions the physical methods of weeding.
Carrying out earthing up for growing a suitable crop.	Illustrates earthing up for a suitable crop.	Carries out earthing up for a suitable crop.	Describes earthing up for a suitable crop.	Names suitable crops for earthing up.
Carrying out hardening for a suitable crop.	Analyses hardening for a suitable crop.	Carries out hardening on a suitable crop.	Outlines hardening on a suitable crop.	States suitable crops for hardening.

STRAND 3.0: ANIMAL PRODUCTION				
Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
3.0 Animal Production	3.1 Animal Handling (6 lessons)	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> a) examine forms of animal handling in the community b) demonstrate how to defend animals against mistreatment in the community c) demonstrates how to handle animals humanely in the community d) create awareness on importance of humane treatment of animals in the community. 	<p>Learner is <i>guided individually, purposive groups, or in groups</i> to:</p> <ul style="list-style-type: none"> • Explore the community and share experiences on forms of animal handling in class (<i>humane and inhumane treatments of animals in the community</i>). <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher to give their views.</i> <p><i>Learners with mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher during exploration. Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks or give instructions to a peer, learner support assistant or teacher to perform given tasks under their instructions. Safety precaution should be observed for learners with epilepsy and asthma against triggers such as water, dust and cold (The above adaptation is applicable where speech, mobility, manipulation and safety precautions are</i></p>	<ol style="list-style-type: none"> 1. What are the safe ways of handling animals? 2. Why is it important to handle animals in humane ways?

			<p><i>required in this sub strand).</i></p> <ul style="list-style-type: none"> • Discuss and analyze inhumane treatments such as <i>beating, poor restraining, inappropriate castration, poor transport methods, inappropriate harnessing, inhumane slaughtering, overloading draught animals, and over working.</i> • Suggest solutions for defending animals against inhumane treatments. Such solutions to include proper handling, safe harnessing and castration using approved methods. • Use digital resources to search for information on how various animals should be handled and apply the knowledge to defend animals against mistreatment in the community. <i>As they search for information regulate the screen resolution (light intensity/glare) on digital devices for learners with epilepsy and those with visual impairments. (Apply this adaptation in all subsequent activities that involve use of digital devices in this sub strand).</i> • Role play and dramatize humane handling of various animals in the community. • Develop messages to create community awareness on importance of humane treatment of animals. <p><i>Practical activity:</i> <i>Learners to use safe animal (docile) to demonstrate humane and safe handling of animals.</i></p>	
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<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and collaboration: speaking and teamwork skills as learners consult and speak influentially to the community leadership and community members on appropriate handling of animals during school open days. • Digital literacy: connecting and interacting skills as learners use digital devices, select appropriate websites and application software to search for information on safe handling of animals. • Communication and collaboration: learners share activities on safe handling of animals. • Self-efficacy: learners shares their views in group discussions. 	
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Animal welfare as the learners develop and disseminate messages to defend animals against inhumane treatment in the community. • Social cohesion will be developed as the learners work in groups and interact, consult while searching information on safe animal handling. 	<p>Values:</p> <ul style="list-style-type: none"> • Love will be promoted as learners demonstrate humane treatment of animals to the community through school open days. • Responsibility will be enhanced as learners share tasks on role playing and dramatizing on safe ways of handling animals. • Unity will be promoted as learners work in group activities on safe handling of animals
<p>Link to other subjects:</p> <ul style="list-style-type: none"> • Integrated science as learners relates the body parts used to handle the animals to the functions, sensitivity and safety of the animal • Computer science as learners use digital devices to search for information on animal handling. • Religious education: as learners handle animals in a humane way as God’s creation. • English, Kiswahili, Kenya sign language and indigenous languages as learners converse on human handling. 	
<p>Non-formal activities to support learning:</p> <ul style="list-style-type: none"> • Learners to observe pets in the community noting down the common management practices accorded to them. • Develop posters on safe ways of handling animals to create awareness in the school through Young Farmers Club. 	<p>Suggested Modes of Assessment:</p> <ul style="list-style-type: none"> • Written assessment • Graded observation • Oral assessment
<p>Suggested Learning Resources: Photos, video clips digital devices and related accessories, such as multipurpose communication board, multipurpose stamp and ink.</p> <p>Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Demonstrating how to defend animals against mistreatment in the community.	Illustrates how to defend animals against mistreatment in the community.	Demonstrates how to defend animals against mistreatment in the community.	Explains how to defend animals against mistreatment in the community.	States how to defend animals against mistreatment in the community.
Demonstrating how to handle animals humanely in the community.	Analyses how to handle animals humanely in the community.	Demonstrates how to handle animals humanely in the community.	Outlines how to handle animals humanely in the community.	States how to handle animals humanely in the community.
Creating awareness on importance of humane treatment of animals in the community.	Explores awareness on importance of humane treatment of animals in the community.	Creates awareness on importance of humane treatment of animals in the community.	Outlines awareness messages on importance of humane treatment of animals in the community.	Mentions awareness messages on importance of humane treatment of animals in the community.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
3.0 Animal Production	3.2 General Management of Pets (6 lessons)	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> a) Explores pets reared in the community b) describe factors considered in selecting a pet for rearing c) explain how to acquire a pet for rearing d) describe various management practices in rearing of pets e) appreciate various management practices of rearing pets. 	<p>Learner is guided: <i>individually, in purposive pairs or groups</i> to:</p> <ul style="list-style-type: none"> • Visit the community and explore the pets that are reared by various households. <i>During the visit learners with mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher. Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks or give instructions to a peer, learner support assistant or teacher to perform given tasks under their</i> 	<ol style="list-style-type: none"> 1. How can we rear pets? 2. How do we choose pets for rearing?

			<p><i>instructions. Safety precaution should be observed for learners with epilepsy and asthma against triggers such as water, dust and cold (This adaptation is applicable where mobility, manipulation difficulties and safety precautions are required in this sub strand).</i></p> <ul style="list-style-type: none"> • Acquire information from resource persons on animals reared as pets in the community • Search for information from print and digital resources on factors to consider in choosing a pet for rearing such as social, economic, safety and legal factors and make presentations in class. <i>As they search for information regulate the screen resolution (light intensity/glare) on digital devices for learners with epilepsy and those with visual impairment. Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher during the activity. (This adaptation is applicable where speech difficulties and digital devices are involved in this sub strand).</i> • Discuss various ways of acquiring a pet for rearing such as buying from other community members, gifts, and inheritance • Take an excursion in the community, observe pets and acquire information on management practices such as feeding, housing, sanitation, parasite and disease control. <i>Learners with</i> 	
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			<p><i>mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher during excursion. Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to perform given tasks or give instructions to a peer, learner support assistant or teacher to perform given tasks under their instructions. Safety precaution should be observed for learners with epilepsy and asthma against triggers such as water, dust and cold (The above adaptation is applicable where. Mobility, manipulation and safety precautions are required in this sub strand).</i></p> <ul style="list-style-type: none"> • View a video clip on selected management practices such as feeding, housing, sanitation, parasite and disease control. <i>As they watch learners with short stature could require preferential sitting for better or enhanced view. The learner with postural difficulties could require appropriate positioning. Light intensity to be controlled for learners with epilepsy and those with visual impairment to suit their individual needs.</i> 	
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Core competencies to be developed:

- **Learning to learn:** researching skills as the learners work collaboratively, take excursion and discover various factors considered in choosing an appropriate pet for rearing and the management practices carried out on the pets.
- **Digital literacy:** connecting and interacting skills as learners use digital devices, select appropriate websites and application software to search for information on rearing of pets and their management
- **Communication and collaboration:** learners brainstorm and share information on pet rearing and management practices

<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Animal welfare issues: as the learners appreciate the importance of various management practices in rearing of pets. • Safety: learners secure self and others when handling pets. 	<p>Values:</p> <ul style="list-style-type: none"> • Respect for community values and existing laws will be enhanced as learners appreciate factors to consider in ownership of pets. • Unity will be promoted as learners work together in groups. • Responsibility will be enhanced as learners display cautiousness when handling pets.
<p>Link to other subjects: Social studies as learners appreciate community values, existing laws and by-laws in rearing of animals. Computer science as they search for information on pets from digital devices. Religious Education as learners appreciates and respects pets as God’s creation.</p>	
<p>Non-formal activities to support Learning:</p> <ul style="list-style-type: none"> • Learners to observe pets in the school community noting down the common management practices accorded to them. • Learners to initiate rearing program of their choice of pet through Young Farmers Club. 	<p>Suggested Modes of Assessment</p> <ul style="list-style-type: none"> • Written assessment • Oral assessment • Project
<p>Suggested Learning Resources: Adapted Print materials, photos, adapted digital devices Related service providers: Learner support assistant, physiotherapist, speech therapist, Resource person.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Describing factors considered in choosing a pet for rearing.	Explores factors considered in choosing a pet for rearing.	Describes factors considered in choosing a pet for rearing.	Outlines factors considered in choosing a pet for rearing.	States factors considered in choosing a pet for rearing.
Explaining how to acquire a pet for rearing.	Examines how to acquire a pet for rearing.	Explains how to acquire a pet for rearing.	Outlines how to acquire a pet for rearing.	Mentions how to acquire a pet for rearing.
Describing various management practices in rearing of pets.	Illustrates various management practices in rearing of pets.	Describes various management practices in rearing of pets.	States management practices in rearing of pets.	Lists management practices in rearing of pets
Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry

				Question
3.0 Animal Production	3.3 Preparation of Animal Products (6 lessons)	By the end of the sub strand the learner should be able to: a) sort and grade eggs for various purposes, b) process raw honey from the combs, c) pack processed honey for storage and use, d) embrace the value of preparing animal products for use, storage and marketing.	Learner is guided individually, or in purposive groups, or in groups to: <ul style="list-style-type: none"> Groups work to analyses sampled eggs, brainstorm on factors to consider when grading eggs, then sort and grade the eggs. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher during the activity. Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices to sort and grade the eggs or give instructions to a peer, learner support assistant or teacher to perform the task under their instructions. Safety precaution should be observed for learners with epilepsy and asthma against triggers such as dust during the activity (This adaptation is applicable where speech, manipulation difficulties and health conditions are involved in this sub strand).</i> Process a provided sample of raw honey from combs using crushing and straining method. Pack the processed honey in appropriate containers such as <i>plastic, glass or aluminum containers.</i> 	<ol style="list-style-type: none"> Why should we sort and grade eggs? How can raw honey be processed?

			<ul style="list-style-type: none"> • Discuss the importance of sorting and grading eggs and processing of raw honey. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: evaluation and decision-making skills as learners assess the problem of unprocessed honey and devise ways of processing raw honey from the combs. • Communication and collaboration: learners engage in group work activities in the sorting of eggs and processing of honey. • Self-efficacy: learners gains through active participation in the activities 				
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Financial literacy as learners adds value of honey from raw to semi processed honey and as they sort and grade eggs for various purposes. • Health issues in Education: as learners develop healthy eating habits through processing raw honey from the combs. 		<p>Values:</p> <ul style="list-style-type: none"> • Integrity will be promoted in applying ethical methods of preparing animal products • Love will be promoted as learners embrace each other’s view in group discussion • Respect will be enhanced as learners engage in group activities. 		
<p>Link to other subjects:</p> <p>Pre technical studies as learners use technology in processing of animal products.</p> <ul style="list-style-type: none"> • Home Science: learners appreciate nutritional value of eggs and honey in the diet. Science and technology as learners learn to process raw honey from the combs and package. 				
<p>Non-formal Activities to Support Learning: Learner to initiate egg and honey production projects through the Young Farmers club.</p>		<p>Suggested Modes of Assessment:</p> <ul style="list-style-type: none"> • Written assignment • Graded observation • Oral assessment 		
<p>Suggested Learning Resources: Photos and video clips, adapted containers such as plastic, glass or aluminum containers. Adapted digital devices and related accessories, such as multipurpose communication board, multipurpose stamp and ink.</p> <p>Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.</p>				

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Sorting and grading eggs for various purposes.	Analyses, sorts and grades eggs for various purposes.	Sorts and grades eggs for various purposes.	Sorts eggs for various purposes.	Grades eggs for various purposes.
Processing raw honey from the combs.	Demonstrates processing of raw honey from the combs.	Processes raw honey from the combs.	Outlines methods of processing of raw honey from the combs.	Mentions methods of processing of raw honey from the combs.
Packing processed honey for storage and use.	Analyses packaging of processed honey for storage and use.	Packs processed honey for storage and use.	Outlines ways of packaging processed honey for storage and use.	States ways of packaging processed honey for storage and use.

STRAND 4.0: AGRICULTURE AND TECHNOLOGY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
<p>4.0 Agriculture and Technology</p>	<p>4.1 Off-season Cropping Techniques (9 lessons)</p>	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> a) explore the meaning of off-season cropping as a farming technique b) explore the importance of off-season cropping in Agriculture c) choose appropriate technology to support off-season cropping d) describe appropriate techniques used in off-season cropping e) appreciate the importance of off-season cropping techniques and technologies for food security. 	<p>Learner is guided <i>individually, or in purposive pairs or in groups</i> to:</p> <ul style="list-style-type: none"> • Form pairs to brainstorm and share in class the meaning of off-season cropping and then share in plenary. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher during the activity. (This adaptation is applicable where speech difficulties are involved in this sub strand).</i> • Search for the meaning of off-season cropping using print and digital resources. <i>Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices during the activity or give instructions to a peer, learner support assistant or teacher to perform the task under their instructions. As they search for information regulate the screen resolution (light intensity/glare) on digital devices for learners with epilepsy and those with visual impairment. (This adaptation is applicable where manipulation difficulties and digital devices are applicable in this sub strand).</i> • Discuss the importance of off-season cropping 	<ul style="list-style-type: none"> 1. How can we ensure continuous supply of vegetables in farming? 2. Why should we practice off-season cropping in farming?

			<p>and in a plenary share derived points such as continuous supply of food, regular income and high market value.</p> <ul style="list-style-type: none"> • Search for information on applicable technologies for off-season cropping such as <i>innovative drip irrigation and container gardening</i>. • Discuss the off-season crop production techniques such as <i>timed planting, staggered planting and succession planting</i>. • discuss the importance of off-season crop production techniques and technologies. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: open mindedness and creativity skills as learners deduce appropriate off-season techniques and technologies for continuous food supply in the community. • Communication and collaboration: are enhanced through group activities as learners acquire and exchange ideas on off season cropping techniques • Digital literacy: learners uses digital devices to access information on off season cropping techniques 				
<p>Pertinent and Contemporary Issues (PCIs)</p> <ul style="list-style-type: none"> • Environmental awareness and food security: issues as learners analyses food security challenges and determine appropriate off-season cropping techniques to solve them. • Analytical thinking skills: learners identify technologies for off season cropping in farming in order to promote food security 		<p>Values:</p> <ul style="list-style-type: none"> • Respect will be enhanced as learners make presentations on appropriate techniques and technologies for off-season cropping • Unity will be promoted as learners work together in group activities and share information on off season cropping techniques. • Love will be promoted as learners embrace each other’s view in group discussions 		
<p>Link to other subjects:</p> <ul style="list-style-type: none"> • Pre technical studies as learners integrate off-season techniques and technologies in the community for continuous food supply. • Science and technology as learners use technologies for off season cropping. 				
<p>Non-formal Activities to Support Learning</p> <ul style="list-style-type: none"> • Learners to initiate beautification project through club activities of the school using crop plants on framed suspended gardens 		<p>Suggested Modes of Assessment</p> <ul style="list-style-type: none"> • Graded oral assessment • Written tests 		

- Project journal

Suggested Learning Resources

Video clips on crops growing on simple drip irrigation and assorted planting materials of crops that grow in the locality
 Organic manures, organic mulch materials, adapted gardening tools and equipment, multipurpose communication boards,
 Materials for constructing framed suspended gardens: pieces of wood, wire, strings and containers
Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.

Suggested Assessment Rubric

Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Exploring the importance of off-season cropping in Agriculture.	Illustrates the importance of off-season cropping in Agriculture.	Explores the importance of off-season cropping in Agriculture.	Outlines the importance of off-season cropping in Agriculture.	Mentions the importance of off-season cropping in Agriculture.
Choosing appropriate technology to support off-season cropping.	Explores appropriate technology to support off-season cropping.	Chooses appropriate technology to support off-season cropping.	Describes appropriate technology to support off-season cropping.	Names appropriate technology to support off-season cropping.
Describing appropriate techniques used in off-season cropping.	Illustrates appropriate techniques used in off-season cropping.	Describes appropriate techniques used in off-season cropping.	Outlines appropriate techniques used in off-season cropping.	Names appropriate techniques used in off-season cropping.

Strand	Sub Strand	Project Outcomes	Suggested Learning Experiences	Key Inquiry Question
4.0 Agriculture and Technology	4.2 Framed Suspended Gardens (9 lessons)	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> a) examine off-season crops suitable for suspended gardening, b) select suitable site for framed structure suspended garden, c) design framed structure for suspended gardens, d) construct framed structures for suspended gardens, e) establish and manage selected off-season crop on suspended gardens, f) create educative messages on the framed suspended gardens. 	<p>Learners are guided <i>individually, or in purposive pairs or in groups</i> to:</p> <ul style="list-style-type: none"> • Identify suitable crops that meet the following criteria: <ul style="list-style-type: none"> - <i>Can be established on a suspended garden on framed structures sited in small spaces such as along the drive way, pathways or any other place in the school that receives regular visitors.</i> - <i>Can enhance beauty.</i> - <i>Can grow within a short period of time (not a perennial crop). Learners with manipulation difficulties could use alternative functional parts of the body or appropriate assistive devices during the activity or give instructions to a peer, learner support assistant or teacher to perform the task under their instructions (This adaptation is applicable where manipulation activities are involved in this sub strand)</i> • <i>In purposive groups learners</i> Identify suitable site in the school compound to prepare framed structures for suspended gardens. <i>Learners with speech difficulties could be lip read by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication</i> 	<ol style="list-style-type: none"> 1. How can we innovatively grow crops in limited space? 2. How can we prepare a framed suspended garden?

			<p><i>modes or be assisted by peers, learner support assistant or teacher during the activity. (This adaptation is applicable where speech difficulties are involved in this sub strand)</i></p> <ul style="list-style-type: none"> • Design and sketch plans for framed suspended gardens. • Source for materials (locally available materials such as wires, wooden planks, metal bars and poles) to construct framed suspended garden. <i>Learners with mobility difficulties could use relevant assistive technology with or without physical assistance from peers, learner support assistant or teacher during the activity. (This adaptation is applicable where mobility difficulties are involved in this sub strand).</i> • Assign themselves tasks towards construction of the framed structures, establishment and management of selected off-season crops on the suspended garden. • Carry out assigned tasks to construct the framed structures and establish selected off-season crops. • Carry out relevant tasks to manage the off-season crop. • Create educative messages on the framed suspended gardens to pass to the school community. 	
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<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Self-efficacy: self-awareness and planning skills as learners plan, implement and manage various tasks such as designing, siting, construction, crop establishment and management on the suspended gardens. • Critical thinking and problem solving: interpretation and inferencing skill as learners articulate problems of crop growing on limited spaces, formulate and implement solution to solve the problem through suspended gardens. • Creativity and imagination: observation and making connection skills as learners design, sketch framed structures and innovatively site the structures within the school compound. • Communication and collaboration is enhanced through group activities as learners design and sketch plans for framed suspended gardens. 	
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Environmental protection and conservation as learners re-use locally available materials to construct framed suspended gardens. • Analytical thinking skills as learners prepare framed structures for suspended gardens. 	<p>Values:</p> <ul style="list-style-type: none"> • Unity is promoted as learners carry out team work activities while planning, implementing and managing the framed suspended gardens. • Love will be promoted as learners embrace each other's view in group discussions. • Responsibility will be enhanced as learners actively participate in project activities on framed suspended gardens.
<p>Link to other subjects:</p> <p>Pre technical studies as learners apply hands-on skills to design, construct and manage framed suspended gardens.</p> <p>English, Kiswahili and Kenya sign language as learners communicate during discussions.</p> <p>Visual arts as learners draw diagrams during designing and sketch plans for framed suspended gardens.</p>	
<p>Non-formal Activities to Support Learning:</p> <ul style="list-style-type: none"> • Learners to initiate beautification project through club activities of the school using crop plants on framed suspended gardens 	<p>Suggested Modes of Assessment:</p> <ul style="list-style-type: none"> • Graded oral assessment • Written tests • Project journal
<p>Suggested Learning Resource</p> <p>Video clips, Organic manures, organic mulch materials, adapted gardening tools and equipment</p> <p>Materials for constructing framed suspended gardens: pieces of wood, wire, strings and containers</p> <p>Multipurpose communication boards.</p> <p>Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Designing framed structures for suspended gardening.	Critiques framed structures for suspended gardening.	Designs framed structures for suspended gardening.	Sketches framed structures for suspended gardening.	Identifies structures for suspended gardening.
Constructing framed structures for suspended gardening in the school.	Analyses framed structures for suspended gardening in the school.	Constructs framed structures for suspended gardening in the school.	Describes framed structures for suspended gardening in the school.	Mentions structures for suspended gardening in the school.
Establishing and manage selected off-season crop on suspended gardens.	Analyses the establishment of selected off-season crop on suspended gardens.	Establishes and manages selected off-season crop on suspended gardens.	Outlines the management of selected off season crop on suspended gardens.	Lists the management practices of selected off-season crop on suspended gardens.
Creating educative messages on the framed suspended gardens.	Designs educative messages creatively on the framed suspended gardens.	Creates educative messages on the framed suspended gardens.	Outlines educative messages on the framed suspended gardens.	Mentions educative messages on the framed suspended gardens.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
4.0 Agriculture and Technology	4.3 Value Addition Techniques (7 lessons)	By the end of the sub strand the learner should be able to: a) explore the meaning of value addition in crop produce b) examine ways of adding value on crop produce c) process a selected crop produce to add value d) appreciate the importance	Learner is guided <i>individually, or in purposive pairs or in groups</i> to: <ul style="list-style-type: none"> Use digital devices to search and share information on meaning and examples of value addition in crop produce. <i>As they search for information regulate the screen resolution (light intensity/glare) on digital devices for learners with epilepsy and those with visual difficulties. Learners with manipulation difficulties could use alternative functional</i> 	<ol style="list-style-type: none"> Why do we add value to crop produce? How can we add value to crop produce?

		<p>of value addition on crop produce.</p>	<p><i>parts of the body or appropriate assistive devices during the activity or give instructions to a peer, learner support assistant or teacher to perform the task under their instructions. Learners with speech difficulties could be lip red by peers, mime, write/type/sign, point, use assistive technology such as multipurpose communication board, text to speech software or alternative communication modes or be assisted by peers, learner support assistant or teacher during the activity (This adaptation is applicable where manipulation, speech difficulties and digital activities are involved in this sub strand).</i></p> <ul style="list-style-type: none"> • Discuss ways of adding value to crop produce such as <i>potatoes, mangoes, vegetables, cassava, groundnuts, semis, sweet potatoes and pumpkins.</i> • Process a provided sample of crop produce such as <i>potatoes, mangoes, vegetables, cassava, groundnuts, simsim, sweet potatoes and pumpkins</i> to add value using appropriate methods like <i>drying and frying.</i> • Compare the processed crop produce with raw crop produce in terms of <i>monetary value and storage life.</i> <p><i>Practical activity:</i> <i>Learners to select a crop produce of their choice and process the produce for value addition using applicable technique.</i></p>	
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<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: evaluation and decision-making skills as the learners search for information and select a suitable method of adding value to a crop produce. • Self-efficacy: self-awareness and planning skills as learners process and add value to a provided sample of crop produce • Communication and collaboration are enhanced through discussions and practical activity on crop produce • Digital literacy: learners uses digital devices to access information on value addition in crop produce 	
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Nutrition, health and food security as learners process crop produce to increase shelf life and reduce food spoilage through value addition processes. • Financial literacy/ Sustainable consumption as learners process crop produce to increase its monetary value and shelf life 	<p>Values</p> <ul style="list-style-type: none"> • Integrity will be enhanced as the learners observe hygiene and safety standards during processing of crop produce. • Responsibility will be promoted as learners take active role in selection of a crop produce of their choice and process it using applicable technique • Unity will be enhanced as learners work together in the practical activity.
<p>Link to other subjects:</p> <ul style="list-style-type: none"> • Pre-technical studies as learners use technology to process crop produce. • Science and technology: learners process the produce for value addition using applicable technique. • Computer science: learners use digital resources to search for information on value addition in crop produce. • English, Kiswahili and Kenya sign language: learners discuss ways of adding value to crop produce. 	
<p>Non-formal Activities to Support Learning:</p> <ul style="list-style-type: none"> • Learners extended activities on value addition of main crops produce available in the locality through school sculbs. • Learners initiate value addition techniques in crop produce in the school during Young Farmers Club 	<p>Suggested Modes of Assessment:</p> <ul style="list-style-type: none"> • Oral Assessment • Written tests • Graded observation
<p>Suggested Learning Resources: Crop produce examples: potatoes, mangoes, vegetables, cassava, groundnuts, simsim, sweet potatoes, pumpkins. Adapted utensils such as frying pans, spoons and knives, multipurpose communication boards.</p> <p>Related service providers: Learner support assistant, physiotherapist, occupational therapist, speech therapist.</p>	

Suggested Assessment Rubric				
Criteria	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Exploring the meaning of value addition in crop produce.	Analyses the meaning of value addition in crop produce.	Explores the meaning of value addition in crop produce.	Outlines the meaning of value addition in crop produce.	States the meaning of value addition in crop produce.
Examining ways of adding value to crop produce.	Explores ways of adding value to crop produce.	Examines ways of adding value to crop produce.	Describes ways of adding value to crop produce.	Lists ways of adding value to crop produce.
Processing a selected crop produce to add value.	Critiques processing of a selected crop produce to add value.	Processes a selected crop produce to add value.	Outlines ways of adding value to a selected crop produce.	Mentions ways of adding value to a selected crop produce.

COMMUNITY SERVICE-LEARNING CLASS ACTIVITY

Community Service Learning (CSL) is an experiential learning strategy that integrates classroom learning and community service to enable learners reflect, experience and learn from the community. The CSL project is expected to benefit the learner, the school and local community. Knowledge and skills on how to carry out a CSL project have been covered in Life Skills Education (LSE).

All learners with physical impairment in Grade 7 will be expected to participate in a CSL class activity. The activity will give learners an opportunity to practise the CSL Project skills covered under LSE. This activity will be undertaken in groups where learners with physical impairment will be purposively grouped to complement each other. Learners will be expected to apply the steps provided to carry out the CSL project.

The activity will take the form of a whole school approach, where the entire school community will be engaged in the learning process. Teachers will guide learners with physical impairment to execute a simple school based CSL class activity. This activity can be done in 1-2 weeks outside the classroom time. The duration may be adjusted accordingly to accommodate learners with physical impairment who may require more time to implement the CSL project.

CSL Skills to be covered

- i) **Research:** Learners will develop research skills as they investigate PCIs to address, ways and tools to use in collecting data, analysing information and presenting their findings.
- ii) **Communication:** Learners will develop effective communication skills as they engage with peers and school community members. These will include listening actively, asking questions, and presentation skills using varied modes.
- iii) **Citizenship:** Learners will be able to explore opportunities for engagement as members of the school community and provide a service for the common good.
- iv) **Leadership:** Learners will develop leadership skills as they take up various roles within the CSL activity.
- v) **Financial Literacy Skills:** Learners will consider how to source and utilise resources effectively and efficiently.
- vi) **Entrepreneurship:** Learners will consider ways of generating income through innovation for the CSL class activity

Suggested PCIs	Specific Learning Outcomes	Suggested Learning Experiences (Customise to the focus of the grade)	Key Inquiry Questions
<p>Learners will be guided to consider the various PCIs provided in the subject in Grade 7 and choose one suitable to their context and reality</p>	<p>By the end of the CSL class activity, the learner should be able to:</p> <ol style="list-style-type: none"> identify a problem in the school community through research; develop a plan to solve the identified problem in the community design solutions to the identified problem implement solution to the identified problem share the findings to relevant actors reflect on own learning and relevance of the project appreciate the need to belong to a community. 	<p>The learners are guided in <i>purposive pairs or groups</i> to:</p> <ul style="list-style-type: none"> brainstorm on pertinent and contemporary issues in the community that need attention <i>and share in class. Learners with speech difficulties could be lip-read by peers, teacher, learner support assistant as they use residual speech or sign, point, write, use multipurpose communication board, speech generating device, eye tracking device or be allowed extra time to express their views. (Apply this adaptation to subsequent learning experiences involving use of speech).</i> discuss various PCIs within the school community and identify the one that requires immediate attention giving reasons for their choice. discuss possible solutions to the identified issue and propose the most appropriate solution to the problem. brainstorm on the resources needed for the activity and source for them. discuss different methods and tools of collecting data and determine the ones suitable for the selected project. develop appropriate tools (<i>Questionnaires, interview schedule, observation checklist</i>) for collecting data with the guidance of the teacher. <i>Learners with manipulation difficulties could be provided with adapted writing materials such as pen/pencils with grip, weighted pens/pencils or writing claws. They could type on tablet or be assisted by a scribe or learner support assistant to develop their tools.</i> collect data and record findings. <i>Learners with mobility difficulties could collect data remotely or be supported by peers and learner support assistant during data collection.</i> 	<ol style="list-style-type: none"> How does one determine community needs? Why is it necessary to be part of a community?

		<p><i>Apply the adaptation on manipulation above here.</i></p> <ul style="list-style-type: none"> • discuss their findings, develop various reporting documents and use them to report on their findings. <i>Apply adaptation on the use of speech and manipulation in this experience.</i> • implement a project to get solutions to the identified problem based on the research report. <i>Apply adaptation on the use of speech, manipulation and mobility in this experience. Ensure the safety of the learners as they manipulate the tools, materials, equipment and as they explore the environment.</i> • use feedback from peers and the school community to improve on the implementation of the project. • discuss the successes, challenges faced while implementing the project activities and lessons learnt; write a report and share through various media to peers and the school community. <i>Apply adaptation on the use of speech and writing above. Learners with manipulation difficulties could be provided with adapted digital resources with appropriate accessibility features or be supported by peers, learner support assistant or teacher to manipulate the digital resources. Light intensity should be controlled for learners with epilepsy and those with visual impairment.</i> • reflect on how the project enhanced learning while at the same time facilitating service to the school by providing solutions to the identified issue(s). 	
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Assessment Rubric				
Criteria	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Identifying a pertinent issue in school the community to be addressed.	Gives Justification for the identified pertinent issue in the school community to be addressed.	Identifies a pertinent issue in the school community to be addressed.	States a pertinent issue in the school community to be addressed.	Recalls a pertinent issue discussed in class.
Planning to solve the identified issue.	Designs and develops a step-by-step plan of the activities to be carried out in the process of solving the problem.	Plans to solve the identified issue.	Outlines a plan to solve the identified problem.	States activities to be included in a plan to solve the identified problem.
Designing and implementing solutions to the identified problem.	Designs, analyses and implements solutions to the identified problem.	Designs and implements solutions to the identified problem.	Designs solutions to the identified problem.	Suggests solutions to the identified problem.

APPENDIX 1: LIST OF ASSESSMENT METHODS, LEARNING RESOURCES AND NON-FORMAL ACTIVITIES

Strand	Sub strand	Suggested assessment methods	Suggested learning resources	Suggested non-formal activities
1.0 Conserving Agricultural Environment	1.1 Soil pollution control	<ul style="list-style-type: none"> • Written assignment. • Observation of learning activities. 	Relevant video clips on causes of soil pollution. Manilla papers and marker pens to create posters on soil pollution control.	Learners to initiate campaigns in and out of school to sensitise parents and community members on protecting soil from pollution.
	1.2 Water conservation measures	<ul style="list-style-type: none"> • Oral assessment • Observation of learning activities • Group project portfolio on preparation of water conservation structures. 	Garden tools such as jembes, fork jembes, spade, panga, and slasher. Others: Mulch materials, digital resources and planting materials such as banana suckers and sugarcane.	Learners to initiate water harvesting and conservation measures against runoffs in or near the school.
	1.3 Agroforestry	<ul style="list-style-type: none"> • Written tests • Graded observation of group work activities • Project portfolio in establishment of one-tree project. 	Topical video clips on agroforestry trees used in crops and pasture fields. Garden tools such as jembes, fork jembes, spade, panga, slasher. Print materials with information and photos on agroforestry.	Learners to initiate <i>one-tree project</i> in or near the school.
2.0 Crop Production	2.1 Preparation of Planting site	<ul style="list-style-type: none"> • Written assignment • Graded observation • Oral assessment 	Samples of seeds of various sizes and assorted vegetative planting materials. Suitable planting sites such as on the walls of buildings, along fence lines and driveways in the school. Suitable containers for making planting site. Manure. Garden tools and equipment such as	Learners to initiate display sites/crop museum in or near the school.

			jembes, pangas and slashers	
	2.2 Crop establishment	<ul style="list-style-type: none"> • Written tests • Graded observation of group work activities • Project portfolio in establishment of a crop on the prepared planting site. 	<p>Samples of seeds and vegetative planting materials (both appropriate and inappropriate) for learners to select the right ones for sowing or planting.</p> <p>Digital devices and related accessories.</p> <p>Garden tools and equipment such hoes, panga, planting line and tape measure.</p>	
	2.3 Crop management	<ul style="list-style-type: none"> • Written tests • Graded observation of group work activities • Project portfolio in management (thinning, gapping weeding and earthing-up) of established crops. • Project report 	Digital devices to search for information and take photos, garden tools and equipment to carry out management practices.	
3.0 Animal Production	3.1 Animal Handling	<ul style="list-style-type: none"> • Written assignment • Graded observation of learner demonstrations • Oral assessment on animal handling. 	Photos, video clips on humane ways of handling animals.	Learners to observe pets in the community, noting down the common management practices accorded to them.
	3.2 General management of Pets	<ul style="list-style-type: none"> • Written assignment • Oral assessment on factors considered in selecting a pet. 	Print materials and digital resources on common pets.	

	3.3 Preparation of animal products	<ul style="list-style-type: none"> • Written assignment • Graded observation • Oral assessment on animal rearing practices. 	<p>Photos and video clips on domestic animals and farm with domestic animals.</p> <p>Video clips on management practices of pets.</p>	
4.0 Agriculture and Technology	4.1 Off-season cropping techniques	<ul style="list-style-type: none"> • Graded oral assessment • Written tests • Project journal on construction and establishment of framed suspended garden. 	<p>Video clips on crops growing on simple drip irrigation and assorted planting materials of crops that grow in the locality.</p> <p>Organic manures, organic mulch materials, gardening tools and equipment.</p> <p>Materials for constructing framed suspended gardens: pieces of wood, wire and strings, containers.</p>	Learners to initiate beautification project through club activities of the school using crop plants on framed suspended gardens.
	4.2 Framed suspended gardens			
	4.3 Value addition techniques	<ul style="list-style-type: none"> • Oral assessment • Written tests • Graded observation on learner project activities and participation levels. 	<p>Crop produce that can be used for value addition, examples: potatoes, mangoes, vegetables, cassava, groundnuts, simsim, sweet potatoes, pumpkins.</p> <p>Utensils such as frying pan, spoons and knives</p>	Learners extended activities on value addition of main crops produce available in the locality through school clubs.

APPENDIX 2: GUIDELINES ON RESOURCES AND RESOURCE UTILIZATION FOR AGRICULTURE CURRICULUM

The following resources are required across various stands in the curriculum not only for Grade 7 Agriculture but also in other Grades among other subject areas in Junior secondary education level. Agriculture curriculum considers them as key resources and therefore gives these special guidelines:

1. Land (this refers to any space for agricultural activities for the curriculum purposes).

- The curriculum activities **DO NOT** demand for extensive land in schools for the learners to develop the agricultural competencies. The designed activities could be implemented on **any available space** within the school or outside the school as may be deemed appropriate.
- The activities suggested in the curriculum have considered space as a limited resource in Agriculture. The curriculum therefore recommends utilization of any available space in the school compound including but not limited to the following spaces: *small plots of land in or out of the school compound, area along the fence, space along the drive-ways, space in front or behind the classrooms, space on top of large concrete buildings (with special consideration on learner safety), hanging space on walls or hanging framework among others.*
- The spaces mentioned above could appropriately be used with container gardens and ornamental beds (*Note that ornamental beds are not limited to flower plants; the concept is applicable to any crop in this curriculum*).
- Wise and innovative designing, planning and utilization of available space including establishing *limited number of plants* is highly encouraged provided the learners are exposed to a practical and experiential learning of curriculum concepts.

2. Water

- Water is a natural and critical resource in Agriculture. The curriculum recommends that all schools should prioritize water harvesting and storage to avail this critical resource throughout the year. Prioritize water conservation in all suggested activities.

3. Planting materials

- The curriculum recommends use of available materials in the local environment. Where planting is suggested, the curriculum gives a broad option within the category specified in the learning outcome or learning experiences. Allow learners to adopt what is best suited and available in their local environment.

4. Digital devices

- The curriculum suggests use of digital devices to search for information including photos, videos and illustrations to guide concretization of concepts and provoke innovativeness of the learners. Appropriate devices should have internet connectivity and connective accessories. The devices should be used with guidance of the teacher to ensure safety and security of the learners and the devices.
- Digital devices are required across the curriculum as support tool to access and share information. They are suggested in several sub stands but may be used in all the sub strands in the curriculum. Digital devices, resources and related accessories include but not limited to: computer, laptop, tablet, smart phone, digital camera, flash disks, DVDs, memory card, internet connectivity devices, projector, external memory drive, connectivity cables, source of power and printer.

5. Assorted farm tools and equipment

- These tools and equipment may be used selectively based on the actual task to be carried out in the learning process.
- The tools and equipment include but not limited to the following common tools: hammer, pliers, knife, garden trowel, panga, jembe, slasher, spade, shovel, wheel barrow, manure fork, fork jembe, tape measure, string, secateurs, pruning saw and watering can. The tools and equipment should be shared across the Grades in the Junior secondary level. The number of tools should not be a major hindrance since their utilization is based on the particular activity to be carried out during the lesson or project time. Project activities could best be carried out in organized learner-groups.