REPUBLIC OF KENYA

MINISTRY OF EDUCATION

JUNIOR SECONDARY SCHOOL CURRICULUM DESIGN

AGRICULTURE
GRADE 7

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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FOREWORD

The Government of Kenya is committed to ensuring that policy objectives for Education, Training and Research meet the aspirations of the Kenya Constitution 2010, the Kenya Vision 2030, National Curriculum Policy 2019, the United Nations Sustainable Development Goals (SDGs) and the Regional and Global conventions to which Kenya is a signatory. Towards achieving the mission of Basic Education, the Ministry of Education (MoE) has successfully and progressively rolled out the implementation of the Competency Based Curriculum (CBC) at Pre-Primary and Primary School levels. The roll out of Junior Secondary School (Grade 7-9) will subsequently follow as from 2023-2025.

The curriculum designs at this level build on competencies attained by learners at the end of the Primary School cycle. Further, they provide opportunities for learners to continue exploring and nurturing their potentials as they prepare to transit to Senior Secondary School.

The curriculum designs present National Goals of Education, essence statements, general and specific expected learning outcomes for the learning areas (subjects) as well as strands and sub strands. The designs also outline suggested learning experiences, key inquiry questions, core competencies, Pertinent and Contemporary Issues (PCIs), values, Community Service Learning (CSL) activities and assessment rubric.

It is my hope that all Government agencies and other stakeholders in Education will use the designs to plan for effective and efficient implementation of the CBC.

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PREFACE

The Ministry of Education (MoE) is implementing the second phase of the curriculum reforms with the national roll out of the Competency Based Curriculum (CBC) having been implemented in 2019. Grade 7 is the first level of the Junior Secondary School (JSS) in the new education structure.

Grade 7 curriculum furthers implementation of the CBC to the JSS education level. The main feature of this level is a broad curriculum for the learner to explore talents, interests and abilities before selection of pathways and tracks at the Senior Secondary education level. This is very critical in the realisation of the Vision and Mission of the on-going curriculum reforms as enshrined in the Sessional Paper No. I of 2019 whose title is: *Towards Realizing Quality, Relevant and Inclusive Education and Training for Sustainable Development* in Kenya. The Sessional Paper explains the shift from a Content - Focused Curriculum to a focus on **Nurturing every Learner's potential.**

Therefore, the Grade 7 curriculum designs are intended to enhance the learners' development in the CBC core competencies, namely: Communication and Collaboration, Critical Thinking and Problem Solving, Creativity and Imagination, Citizenship, Digital Literacy, Learning to Learn and Self-efficacy.

The curriculum designs provide suggestions for interactive and differentiated learning experiences linked to the various sub strands and the other aspects of the CBC. The curriculum designs also offer several suggested learning resources and a variety of assessment techniques. It is expected that the designs will guide teachers to effectively facilitate learners to attain the expected learning outcomes for Grade7 and prepare them for smooth transition to the next Grade. Furthermore, it is my hope that teachers will use the designs to make learning interesting, exciting and enjoyable.

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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. The curriculum development process for any level of education involves thorough research, international benchmarking and robust stakeholder engagement. Through a systematic and consultative process, the KICD conceptualised the Competency Based Curriculum (CBC) as captured in the *Basic Education Curriculum Framework* (BECF), that responds to the demands of the 21st Century and the aspirations captured in the Kenya Constitution 2010, the Kenya Vision 2030, East African Community Protocol and the United Nations Sustainable Development Goals (SDGs).

KICD receives its funding from the Government of Kenya to enable the successful achievement of the stipulated mandate and implementation of the Government and Sector (Ministry of Education (MoE) plans. The Institute also receives support from development partners targeting specific programmes. 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. Therefore, the Institute is very grateful for the support of the Government of Kenya, through the MoE and the development partners for the policy, resource and logistical support. Specifically, special thanks to the Cabinet Secretary – MoE and the Principal Secretary – State Department of Early Learning and Basic Education,

We also wish to acknowledge the KICD curriculum developers and other staff, all teachers, educators who took part as panelists; the Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders for their roles in the development of the Grade 7 curriculum designs. In relation to this, we acknowledge the support of the –Chief Executive Officers of the Teachers Service Commission (TSC) and the Kenya National Examinations Council (KNEC) for their support in the process of developing these designs.

Finally, we are very grateful to the KICD Council Chairperson Prof. Elishiba Kimani and other members of the Council for very consistent guidance in the process. We assure all teachers, parents and other stakeholders that these curriculum designs will effectively guide the implementation of the CBC at Grade 7 and preparation of learners for Grade 8.

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LESSON 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.	Sports and Physical Education	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 modernisation. 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 instil 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. Practise relevant hygiene, sanitation and nutrition skills to promote health.
6. Demonstrate ethical behaviour 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 recognises 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
1.0 Conserving Agricultural Environment	**1.1 Soil pollution control** **(6 lessons)**	By the end of the sub strand the learner should be able to: a) explain the causes of soil pollution in farming, b) control soil pollution in agricultural environment, c) promote safe farming practices to prevent soil pollution, d) demonstrate responsibility in using safe farming practices to conserve soil.	Learner is guided to: • form groups, find out and discuss causes of soil pollution in farming such as excessive use of artificial fertilizers, agricultural chemicals and plastic wastes. • search and watch a video clip on causes of soil pollution. • engage in safe soil pollution control practices such as safe disposal of used chemical containers and plastic wastes. • 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.	1. How do farming practices cause soil pollution? 2. How can we control soil pollution through agricultural practices?

Core competencies to be developed: Citizenship: social and civic skills in preserving the environment as learners create awareness in the community to ensure safe disposal of agricultural wastes for clean environment.				
Values: Responsibility as learners promote safe farming practices to conserve the soil.				
Pertinent and contemporary issues (PCIs): Environmental protection and conservation: as learners create awareness in the community against dumping of agricultural wastes.				
Link to other subjects: Integrated science in relating environmental pollutants to soil pollution.				
Assessment rubric				
Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to explain causes of soil pollution in farming.	Makes an elaborately detailed explanation of the causes of soil pollution in farming.	Makes a clear explanation the causes of soil pollution in farming.	Makes an explanation that requires some clarity of details on some causes of soil pollution in farming.	Makes an explanation that requires some correction of details for accuracy on some causes of soil pollution in farming.
Ability to control soil pollution in agricultural environment.	Demonstrates exemplary creativity in the control of two forms of soil pollution in agricultural environment.	Demonstrates ability to control two forms of soil pollution in agricultural environment.	Demonstrates some ability to control one form of soil pollution in agricultural environment.	Demonstrates some ability to control a form of soil pollution in agricultural environment only if given extra external assistance.
Ability to promote safe farming practices to prevent soil pollution.	Shows exemplary creativity in promoting three forms of safe farming practices to prevent soil pollution.	Promotes three forms of safe farming practices to prevent soil pollution.	Promotes two forms of safe farming practices to prevent soil pollution.	Promotes less than two forms of safe farming practices to prevent soil pollution.

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) outline the importance of water conservation in farming, b) construct water retention structures to conserve surface runoff, c) use minimum tillage practices to conserve water in farming, d) appraise water conservation measures in agricultural environment.	Learner is guided to: • work in pairs to discuss the importance of water conservation in farming (such importance to include making water available longer after the rains). • discuss ways of conserving surface runoff to prevent damage of property and collect it in structures such as *water retention ditches, earth basins and water retention pits.* • search for information and apply gained knowledge to carry out minimum tillage practices for water conservation in farming; to include practices such as slashing weeds, restricted cultivation and mulching. • take an excursion to evaluate community farming activities for water conservation.	1. How can we conserve surface runoff for farming? 2. How can we practice minimum tillage to conserve soil moisture?

			Project: 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.*	
Core competencies to be developed: Critical thinking and problem solving: researching skills as learners observe, analyse 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.				
Values: Unity in group initiative when constructing water retention ditches and pits.				
Pertinent and contemporary issues (PCIs): Environmental protection and conservation in construction of retention ditches and retention pits for water conservation in the local environment.				
Link to other subjects: Integrated science as the learners use tools, equipment and technology to construct water conservation structures.				

Assessment rubric				
Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to outline importance of water conservation in farming.	Makes elaborately detailed statements that outlines the importance of water conservation in farming.	Makes clear statements that outlines the importance of water conservation in farming.	Makes some statements that need clarity of details to outline the importance of water conservation in farming.	Makes some statements that need correction of details for accuracy to outline the importance of water conservation in farming.
Ability to construct water retention structures to conserve surface runoff.	Demonstrates exceptional skills and creativity in constructing three water retention structures to conserve surface runoff.	Demonstrates ability to construct three water retention structures to conserve surface runoff.	Demonstrates some ability to construct two water retention structures to conserve surface runoff.	Demonstrates some ability to construct less than two water retention structures to conserve surface runoff.
Ability to use minimum tillage for water conservation in farming.	Shows exemplary skills in using three forms of minimum tillage practices for water conservation in farming.	Uses three forms of minimum tillage practices for water conservation in farming.	Uses two forms of minimum tillage practices for water conservation in farming.	Uses less than two forms of minimum tillage practice 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)	By the end of the sub strand the learner should be able to: a) explain the meaning of agroforestry in conserving the environment, b) describe the importance of agro-forestry in conserving the environment, c) examine the characteristics of agro-forestry trees for conservation of the environment, d) choose appropriate agroforestry trees for conserving environment,	Learner is guided to: • work in pairs to discuss their understanding of the term agro-forestry. • work in groups to search for information on importance of agro-forestry using digital and print resources and make presentation in class. • take a field excursion to observe the uses of various trees as grown in crop and pasture fields. • watch a video clip, identify and choose appropriate agroforestry trees as used in crops and pasture fields. • make presentations on characteristics of a	1. Why should we practice agroforestry? 2. How do agroforestry trees conserve environment? 3. How can we identify and agroforestry tree?

		e) establish agroforestry trees for conservation of the environment, f) embrace the use of agroforestry in conserving the environment.	good agroforestry tree such as ability to grow alongside crops, fast growing, and multiple uses. • explore the environment and choose agroforestry trees that can provide planting material for establishing agroforestry. ***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 is fully established.*	
Core competencies to be developed: Self-efficacy: leadership skills as learner set goals, assign and execute tasks in the agroforestry class project.				

Values: Responsibility while caring for the class project until the planted agroforestry trees are fully established.
Pertinent and contemporary issues (PCIs): Environmental awareness, protection and conservation in establishing agroforestry trees to conserve and improve the environment within the school.
Link to other subjects: Social studies as learners expound their knowledge and skills in environmental conservation through agroforestry.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to describe the importance of agroforestry in conserving the environment.	Gives an illustrative description on the importance of agroforestry in conserving the environment.	Gives a clear description of the importance of agroforestry in conserving the environment.	Gives some description that require clarity of details on the importance of agroforestry in conserving the environment.	Gives some description that require correction of details for accuracy on the importance of agroforestry in conserving the environment.
Ability to choose appropriate agroforestry trees for conserving the environment.	Demonstrates confidence and justification when choosing all appropriate agroforestry trees for conserving the environment.	Chooses all appropriate agroforestry trees (from a provided set of options) for conserving the environment.	Chooses some appropriate agroforestry trees (from a provided set of options) for conserving the environment.	Chooses some appropriate agroforestry trees (from a provided set of options) for conserving the environment only when provided extra prompting clues.
Ability to establish agroforestry trees for conservation of environment.	Shows exceptional creativity and skills in carrying out all activities for establishing agroforestry trees for conservation of environment.	Carries out all activities in establishing agroforestry trees for conservation of environment.	Carries out some activities in establishing agroforestry trees for conservation of environment.	Carries out some activities in establishing agroforestry trees for conservation of environment only when given extra guidance.

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)**	By the end of the sub strand the learner should be able to: a) identify 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.	Learner is guided to: • take excursion in the school compound to identify suitable sites for planting crops. The sites to include ground sites, container sites, on walls, along the fence or along the driveways. • observe provided planting materials and suggest appropriate preparation of their planting sites. The suggestions to include fine tilth for small seeds, medium tilth for medium sized seeds, coarse tilth for large planting materials like tubers, suckers and cuttings. • prepare suitable sites for establishing selected planting materials on the identified areas. The sites to include selected containers and ground seedbeds.	1. How can we prepare different types of planting sites? 2. How does planting material determine planting site preparation?

			• **Practical activity:** *As a class, learners to prepare a suitable planting site in readiness for establishing a crop of their choice.*	

Core competencies to be developed:
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.

Values:
Unity as the learners discuss and work in groups in the activity tasks for identifying and preparing planting sites.

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.

Link to other subjects:
- Pre-Technical studies as learners work with various tools and equipment in preparing planting sites.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify planting sites for establishing crops in the school environment.	Shows contextual creativity in identifying five or more possible sites for planting crops in the school environment.	Identifies five possible sites for planting crops in the school environment.	Identifies four possible sites for planting crops in the school environment.	Identifies less than four possible sites for planting crops in the school environment.

Ability to examine planting site in relation to planting material.	Gives analytical details that examines five considerations for planting site in relation to the planting the material.	Examines five considerations for planting site in relation to the planting the material.	Examines four considerations for planting site in relation to the planting the material.	Examines less than four considerations for planting site in relation to the planting the material.
Ability to prepare site for establishing selected planting material	Demonstrates exceptional innovativeness prepared site ready for establishing selected planting material.	Prepares site ready for establishing selected planting material.	Prepares site that need some few refinements in readiness for establishing selected planting material.	Prepares site that need some repeat work in readiness 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)**	By the end of the sub strand the learner should be able to: 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	Learner is guided to: • search for information on types of planting materials, collect and categorize planting materials as either seeds or vegetative materials. • analyze and select from provided samples of planting materials such as *overgrown woody cuttings, middle woody cuttings, young immature cuttings, mature seeds of different sizes, damaged seeds, wrinkled seeds, chemically treated seeds, and young immature seeds.* • discuss and make presentations on how different materials are planted in a seedbed using methods such as *dibbling, drilling and broadcasting.* • discuss factors determining appropriate time of planting	1. How can planting materials be selected? 2. How can selected planting materials be established?

			such as *soil moisture, onset of rain, timed market, staggered planting and time of harvesting.* • search for information using digital devices, digital apps and corporate websites on expected time for onset of the rain to predict time of planting. ***Practical activity:*** *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.*	

Core competencies to be developed:

- Learning to learn: researching skills as learners engage in searching and discovery learning process in searching for information, categorizing planting materials, analysing 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.

Values:

Unity while working in teams to conduct practical activities and class presentations on establishing a crop from planting materials.

Pertinent and contemporary issues (PCIs): Social cohesion will be developed as the learners work in groups and interact, consult and conduct the practical activities of establishing a selected crop.
Link to other subjects: Integrated science as learners apply scientific concept of germination and viability of planting materials.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to categorize planting materials used for establishing various crops.	Presents an elaborately detailed and correct categorization of planting materials used for establishing various crops.	Presents two correct categorization of planting materials used for establishing various crops.	Presents one correct categorization of planting materials used for establishing various crops.	Presents some categorization that need correction for accuracy of details of planting materials used for establishing various crops.
Ability to select suitable planting materials for crop establishment.	Selects and critically justifies the selection for all suitable planting materials for crop establishment from a set of provided samples.	Selects all suitable planting materials for crop establishment from a set of provided samples.	Selects half or more than half suitable planting materials for crop establishment from a set of provided samples.	Selects less than half suitable planting materials for crop establishment from a set of provided samples.
Ability to describe the methods of planting various crop materials on a seedbed.	Gives an illustrative description of the methods of planting various crop materials on a seedbed.	Gives a clear description of the methods of planting various crop materials on a seedbed.	Gives a description that requires clarification of details on the methods of planting various crop	Gives a description that requires correction for accuracy of details on the methods of planting

			materials on a seedbed.	various crop materials on a seedbed.
Ability to determine appropriate time of planting different types of propagation materials.	Gives elaborate details for consideration in determining appropriate time of planting different types of propagation materials.	Gives accurate details of considerations in determining appropriate time of planting different types of propagation materials.	Gives some details that require clarification for consideration in determining appropriate time of planting different types of propagation materials.	Gives some details that require correction for accuracy in consideration when determining 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 to: • take an excursion to a field with growing crops, observe and differentiate weeds from crops. • use digital devices to take photos of various weeds, compile and make class presentations about the compiled work. • carry out weeding on a selected crop using physical methods such as uprooting weeds, tilling and slashing. • observe the geminated 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.	1. What management practices should be carried out in crop production? 2. Why is it important to carry out crop management practices? 3. How can we carry out management practices in crop production?

			Practical activity: *As a class, learners to carry out management practices (at the opportune time) on a crop of their choice.*	

Core competencies to be developed:
Digital literacy: designing and creating skills as learners take photos of weeds, compile the photos and use digital devices to make class presentations.

Values:
Respect for one another as learners carry out the various management practices for the group project.

Pertinent and contemporary issues (PCIs):
Life Skills: Planning and decision making skills as the learners plan and commit themselves to carry out tasks in management practices during practical lesson activities.

Link to other subjects:
Social studies as learners relate various management practices of selected crops to the elements of weather in their locality.

Assessment rubric

Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to carry out weeding using physical methods.	Demonstrates exceptional skills and creativity in carrying out weeding using three or more physical methods.	Carries out weeding using three physical methods.	Partially carries out weeding using two physical methods.	When guided, carries out weeding using less than two physical methods.

Ability to carry out earthing up for growing a suitable crop.	Shows exceptional skills in carrying out earthing up for a suitable crop.	Carries out earthing-up for suitable crops.	Carries out earthing-up for some suitable crops.	Requires extra guidance to carry out earthing-up for some suitable crops.
Ability to carry out hardening for a suitable crop.	Shows exceptional skills in carrying out hardening for a suitable crop.	Carries out hardening on suitable crop.	Carries out hardening on some suitable crop.	Requires extra guidance to carry out hardening on some suitable crop.

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)	By the end of the sub strand the learner should be able to: a) examine forms of animal handling in the community, b) defend animals against mistreatment in the community, c) handle animals humanely in the community, d) create awareness on importance of humane treatment of animals in the community.	Learner is guided to: • explore the community and share experiences on forms of animal handling (*humane and inhumane treatments of animals in the community*). • discuss and analyze inhumane treatments such as *beating, poor restraining, inappropriate castration, poor transport methods, inappropriate harnessing, inhumane slaughtering, overloading draught animals, and over working.* • 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	1. What are the safe ways of handling animals? 2. Why is it important to handle animals in humane ways?

			knowledge to defend animals against mistreatment in the community. • 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. ***Practical activity:*** *Learners to use safe animal (docile) to demonstrate humane and safe handling of animals.*	
Core competencies to be developed: 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.				
Values: Love as learners demonstrate humane treatment of animals to the community through school open days.				
Pertinent and contemporary issues (PCIs): Animal welfare as the learners develop and disseminate messages to defend animals against inhumane treatment in the community.				
Link to other subjects: Integrated science as learners relate the body parts used to handle the animals to the functions, sensitivity and safety of the animal.				

Assessment rubric				
Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to defend animals against mistreatment in the community.	Gives three or more contextually applicable solutions to defend animals against mistreatment in the community.	Gives three applicable suggestions to defend animals against mistreatment in the community.	Gives two applicable to defend animals against mistreatment in the community.	Gives than two applicable less solutions to defend animals against mistreatment in the community.
Ability to handle animals humanely in the community.	Demonstrates exceptional skills in handling animals humanely in the community.	Demonstrates ability to handle animals humanely in the community.	Demonstrates some ability that need reinforcement to handle animals humanely in the community.	Demonstrates some ability that need correction and extra reinforcement to handle animals humanely in the community.
Ability to create awareness on importance of humane treatment of animals in the community.	Presents exceptionally creative and elaborate messages to create awareness on importance of humane treatment of animals in the community.	Presents clear messages to create awareness on importance of humane treatment of animals in the community.	Presents some messages that need to be refocused for clarity to create awareness on importance of humane treatment of animals in the community.	Presents some messages that need to be corrected for accuracy to create awareness 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)	By the end of the sub strand the learner should be able to: a) identify 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.	Learner is guided to: • visit the community and explore to identify types of pets that are reared by various households. • acquire information from resource persons on animals reared as pets in the community • search for information from print and digital resources to describe factors to consider in choosing a pet for rearing such as social, economic, safety and legal factors • 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 to describe pet management practices such as feeding, housing, sanitation, parasite and disease control. • view a video clip on selected management practices such as feeding,	1. How can we rear pets? 2. How can we choose pets for rearing?

			housing, sanitation, parasite and disease control.	

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.

Values:
Respect for community values and existing laws as learners appreciate factors to consider in ownership of pets.

Pertinent and contemporary issues (PCIs):
Animal welfare as the learners appreciate the importance of various management practices in rearing of pets.

Link to other subjects:
Social studies as learners appreciate community values, existing laws and by-laws in rearing of animals.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to describe factors considered in choosing a pet for rearing.	Gives an elaborately detailed description of four or more factors considered in choosing a pet for rearing.	Gives a description of four factors considered in choosing a pet for rearing.	Gives a description of three factors considered in choosing a pet for rearing.	Gives a description of less than three factors considered in choosing a pet for rearing.
Ability to explain how to acquire a pet for rearing.	Gives an elaborately detailed explanation of three or more ways of acquiring a pet for rearing.	Gives a clear explanation of three ways of acquiring a pet for rearing.	Gives some explanation that require clarity of details on three ways of acquiring a pet for rearing.	Gives some explanation that require correction of details on ways of

				acquiring a pet for rearing.
Ability to describe various management practices in rearing of pets.	Gives an elaborately detailed description of five or more management practices in rearing of pets.	Gives a clear description of five management practices in rearing of pets.	Gives descriptions of four management practices in rearing of pets.	Gives descriptions of less than four 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 to: • work in groups to analyse sampled eggs, brainstorm on factors to consider when grading eggs, then sort and grade the eggs. • process a provided sample of raw honey from combs using crushing and straining method. • pack the processed honey in appropriate containers such as *plastic, glass or aluminium containers.* • discuss the importance of sorting and grading eggs and processing of raw honey.	1. Why should we sort and grade eggs? 2. How can raw honey be processed?
Core competencies to be developed: 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.				
Values: Integrity in applying ethical methods of preparing animal products.				
Pertinent and contemporary issues (PCIs): Financial literacy as learners add value of honey from raw to semi processed honey and as they sort and grade eggs for various purposes.				

Link to other subjects:

- Pre-Technical studies as learners use technology in processing of animal products.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to sort and grade eggs for various purposes.	Demonstrates exceptional skills and efficiency in correctly sorting and grading a full set of provided samples of eggs for a set of provided purposes.	Correctly sorts and grades a full set of provided samples of eggs for a set of provided purposes.	Correctly sorts and grades at least half the set of provided samples of eggs for a set of provided purposes.	Correctly sorts and grades less than half the set of provided samples of eggs for a set of provided purposes.
Ability to process raw honey from the combs.	Demonstrates exceptional skills and innovativeness in processing raw honey from the combs using two methods of honey processing.	Processes raw honey from the combs using two methods of honey processing.	Processes raw honey from the combs using one method of honey processing.	Processes raw honey from the combs with extra external guidance and support to apply the honey processing methods.
Ability to pack processed honey for storage and use.	Demonstrates exceptional creativity and innovation in pack processed honey for storage and use.	Demonstrates ability to pack processed honey for storage and use.	Demonstrates some ability that require reinforcement to complete the task of packing processed honey for storage and use.	Demonstrates some ability that require corrections and reinforcement to complete the task of packing processed honey for storage and use.

STRAND 4.0 AGRICULTURE AND TECHNOLOGY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
4.0 Agriculture and Technology	**4.1 Off-season Cropping Techniques** (9 lessons)	By the end of the sub strand the learner should be able to: a) discuss meaning of off-season cropping as a farming technique, b) explain 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.	Learner is guided to: • form pairs to brainstorm the meaning of off-season cropping and then share in plenary. • search for the meaning of off-season cropping using print and digital resources. • discuss the importance of off-season cropping and in a plenary share derived points such as continuous supply of food, regular income and high market value. • search for information to guide on choice of applicable technologies for off-season cropping such as *innovative drip irrigation and container gardening.*	1. How can we ensure a continuous supply of vegetables in farming? 2. Why should we practice off-season cropping in farming?

			• discuss the off-season crop production techniques such as *timed planting, staggered planting and succession planting.* • discuss the importance of off-season crop production techniques and technologies.	
Core competencies to be developed: Critical thinking and problem solving: open mindedness and creativity skills as learners deduce appropriate off-season cropping techniques and technologies for continuous food supply in the community.				
Values: Respect as learners make presentations on appropriate techniques and technologies for off-season cropping.				
Pertinent and contemporary issues (PCIs): Environmental awareness and food security issues as learners analyse food security challenges and determine appropriate off-season cropping techniques to solve them.				
Link to other subjects: Pre-Technical studies as learners integrate off-season techniques and technologies in the community for continuous food supply.				

Assessment rubric				
Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to explain the importance of off-season cropping in Agriculture.	Gives an elaborately detailed explanation on the importance of off-season cropping in Agriculture.	Gives a clear explanation on the importance of off-season cropping in Agriculture.	Gives an explanation that require clarity of details for the importance of off-season cropping in Agriculture.	Gives an explanation that require correction for accuracy of details on the importance of off-season cropping in Agriculture.
Ability to choose appropriate technology to support off-season cropping.	Chooses all appropriate and contextually applicable technology to support off-season cropping.	Chooses all appropriate technology to support off-season cropping.	Chooses some appropriate technology to support off-season cropping.	Chooses some appropriate technology to support off-season cropping only if given extra guidance.
Ability to describe appropriate techniques used in off-season cropping.	Gives an illustratively elaborate description on appropriate techniques used in off-season cropping.	Gives a clear description on appropriate techniques used in off-season cropping.	Gives a description that require clarity of details on appropriate techniques used in off-season cropping.	Gives a description that require correction for accuracy of details on appropriate techniques used in off-season cropping.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
4.0 Agriculture and Technology	**4.2 Framed Suspended Gardens** (9 lessons)	By the end of the sub strand the learner should be able to: a) identify 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.	Learners are guided to: • identify suitable crops that meet the following criteria: *- 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.* *- Can enhance beauty.* *- Can grow within a short period of time (not a perennial crop).* • identify suitable site in the school compound to prepare framed structures for suspended gardens. • design and sketch plans for framed suspended gardens. • source for materials (locally available materials such as wires, wooden planks, metal	1. How can we innovatively grow crops in limited space? 2. How can we prepare a framed suspended garden?

			bars and poles) to construct framed suspended garden. • 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.	
Core competencies to be developed: • 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.

Values:
Unity as learners carry out team work activities while planning, implementing and managing the framed suspended gardens.

Pertinent and contemporary issues (PCIs):
Environmental protection and conservation as learners re-use locally available materials to construct framed suspended gardens.

Link to other subjects:
Pre-Technical studies as learners apply hands-on skills to design, construct and manage framed suspended gardens.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to design framed structures for suspended gardening.	Presents a detailed, graphically drawn sketch design of framed structures for suspended gardening.	Presents a sketch design of framed structures for suspended gardening.	Presents a sketch design that omits some details on framed structures for suspended gardening.	Presents a sketch design that requires correction for accuracy of some details on framed structures for suspended gardening.
Ability to construct framed structures for suspended	Demonstrates exceptional creativity and innovative skills to construct framed	Demonstrates significant ability to construct framed structures for	Demonstrates some ability that require some reinforcement to construct framed structures for	Demonstrates some ability that require some both reinforcement and extra physical support to construct framed

gardening in the school.	structures for suspended gardening in the school.	suspended gardening in the school.	suspended gardening in the school.	structures for suspended gardening in the school.
Ability to establish and manage selected off-season crop on suspended gardens.	Demonstrates exceptional innovativeness in carrying out both establishment and management to an adequate level for selected off-season crop on suspended gardens.	Carries out both establishment and management to an adequate level for selected off-season crop on suspended gardens.	Carries out either establishment or management to some inadequate level for selected off-season crop on suspended gardens.	Carries out both establishment and management to some inadequate level for selected off-season crop on suspended gardens.
Ability to create educative messages on the framed suspended gardens.	Creates illustratively innovative and elaborately clear educative messages on the framed suspended gardens.	Creates clear educative messages on the framed suspended gardens.	Creates some messages that require some clarity of details to pass educative messages on the framed suspended gardens.	Creates some messages that require some correction of details for accuracy to pass 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) explain 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 of value addition on crop produce.	Learner is guided to: • use digital devices to search and share information on meaning and examples of value addition in crop produce. • discuss ways of adding value to crop produce such as *potatoes, mangoes, vegetables, cassava, groundnuts, simsim, sweet potatoes and pumpkins.* • process a provided sample of crop produce such as *potatoes, mangoes, vegetables, cassava, groundnuts, simsim, sweet potatoes and pumpkins* to add value using appropriate methods like *drying and frying.* • compare the processed crop produce with raw crop produce in terms of *monetary value and storage life.* ***Practical activity:*** *Learners to select a crop produce of their choice and process the produce for value addition using applicable technique.*	1. Why do we add value to crop produce? 2. How can we add value to crop produce?

Core competencies to be developed:
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.

Values:
Integrity as the learners observe hygiene and safety standards during processing of crop produce.

Pertinent and contemporary issues (PCIs):
Nutrition, health and food security as learners process crop produce to increase shelf life and reduce food spoilage through value addition processes.

Link to other subjects:
Pre-Technical studies as learners use technology to process crop produce.

Assessment rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to explain the meaning of value addition in crop produce.	Gives an elaborately detailed and clear explanation of the meaning of value addition in crop produce.	Gives a clear explanation of the meaning of value addition in crop produce.	Gives an explanation that require clarity of details for the meaning of value addition in crop produce.	Gives an explanation that require correction for accuracy of details for the meaning of value addition in crop produce.
Ability to examine ways of adding value to crop produce.	Gives a contextualized detailed information examining ways of adding value to eight selected crop produce.	Examines ways of adding value to eight selected crop produce.	Examines ways of adding value to at least seven selected crop produce.	Examines ways of adding value to less than seven selected crop produce.

Ability to process a selected crop produce to add value.	Demonstrates exceptional skills and innovation to processes a selected crop produce to add value.	Demonstrates significant ability to processes a selected crop produce to add value.	Demonstrates some ability that require reinforcement of ideas to processes a selected crop produce to add value.	Demonstrates some ability that require both reinforcement of ideas and physical support to processes a selected crop produce to add value.

COMMUNITY SERVICE LEARNING - CLASS ACTIVITY

Community Service Learning (CSL) is an experiential learning strategy that integrates classroom learning and community service. It gives learner an opportunity to participate, experience, learn and reflect from the community engagement. 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 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. The activity will be undertaken in groups for purposes of learning. Learners will be expected to apply knowledge and skills on stages of the CSL project to carry out the preferred activity as per the guidelines provided in the template. The learning approach 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 to execute a simple school based integrated CSL class activity. The activity can be done in a period of between 4 to 6 weeks outside the classroom time.

CSL Skills to be covered:

- **Research skills:** Learners will develop research skills as they investigate PCIs to be addressed by the activity, ways and tools to use in collecting data, manner in which they will analyse information and how to present their findings.
- **Communication skills:** Learners will develop effective communication skills for as they engage with peers and school community members. The skills will include listening actively, asking questions, presentation skills using varied modes among other communication related skills.
- **Citizenship skills:** Learner will develop citizenship skills as they explore opportunities for engagement with members of the school community and while providing a service for the common good.
- **Leadership skills**: Learners will develop leadership skills as they take up various roles within the CSL activity.
- **Financial Literacy Skills:** Learners will develop these skills as they consider how to undertake the project, while sourcing and utilising resources effectively and efficiently for the success of the project.
- **Entrepreneurship skills**: Learners will develop the skills as they consider prevailing opportunities and ways of generating income through innovation for the CSL class activity.

Suggested PCIs	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
The learners will be guided to consider the various PCIs provided in the subjects in Grade 7 and choose one suitable to their context and reality.	By the end of the CSL class activity, the learner should be able to: a) identify a problem in the school community through research, b) plan to solve the identified problem in the community, c) design solutions to the identified problem, d) implement solution to the identified problem, e) share the findings to relevant actors, f) reflect on own learning and relevance of the project, g) appreciate the need to belong to a community.	The learner is guided to: • brainstorm on pertinent and contemporary issues in their school that need attention. • choose a PCI that needs immediate attention and explain why the attention is needed. • discuss possible solutions to the identified issue. • propose the most appropriate solution to the problem. • discuss the tools and methods to be used to collect information on the problem (questionnaires, interview schedule, observation schedule). • develop tools for collecting information/data. • identify resources they need for the activity. • collect the information/data using various means.	1. How does one determine community needs? 2. Why is it necessary to be part of a community? 3. What can one do to demonstrate a sense of belonging.

		• develop various reporting documents on their findings. • use the developed tools to report on their findings. • implement project. • collect feedback from peers and school community regarding the CSL activity. • share the report on activity through various media to peers and school community. • discuss the strengths and weaknesses of implemented project and lessons learnt. • reflect on how the project enhanced own learning while at the same time facilitated service on the issue to the school community.	

Assessment rubric

Indicator	**Exceeds Expectation**	**Meets Expectation**	**Approaches Expectation**	**Below Expectation**
Ability to identify a problem in the school community	Identifies a clearly contextual pertinent issue (with elaborately refined details) in the school	Identifies a clearly contextual pertinent issue in the school community through research.	Identifies a contextual pertinent issue (with details that need to be refocused for clarity) in	Identifies a contextual pertinent issue (with details that need to be corrected for accuracy) in the school

through research.	community through research.		the school community through research.	community through research.
Ability to plan to solve the identified problem	Learner correctly and systematically establishes resources needed, develops plans, assigns responsibilities, and generates data on the CSL project.	Learner outlines a clear plan of resources needed, responsibilities, generates data required for the CSL project.	Learner outlines a plan that requires clarity on resources needed, responsibilities, generates data required for the CSL project.	Learner outlines a plan that requires correction for accuracy on resources needed, responsibilities, generates data required for the CSL project.
Ability to design solutions to the identified problem and implement them.	Demonstrates exemplary creativity in application of knowledge and skills to design applicable solutions to the identified problem and implement them.	Demonstrates application of knowledge and skills to design applicable solutions to the identified problem and implement them.	Demonstrates some level of application of knowledge and skills to design some solutions to the identified problem and implement them.	Demonstrates some need for extra guidance and support to apply of knowledge and skills to design some solutions to the identified problem and implement them.
Ability to share findings to relevant actors.	Presents illustratively elaborate and clear messages in information sharing the findings of the issue addressed in the activity.	Presents clear messages in information sharing the findings of the issue addressed in the activity.	Presents some messages that need clarity of details in the information sharing the findings of the issue addressed in the activity.	Presents some messages that need correction of details in the information sharing for findings of the issue addressed in the activity.

Ability to reflect on own learning and relevance of the activity.	Presents exceptionally elaborate outline of both achievements and areas of improvement out of the CSL activity on the target community and own learning.	Presents a clear outline of both achievements and areas of improvement out of the CSL activity on the target community and own learning.	Presents either some outlined achievements or some areas of improvement out of the CSL activity on the target community and own learning.	Presents details that need to be refocused to show either some outlined achievements or some areas of improvement out of the CSL activity on the target community and own learning.

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	• 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	• Oral assessment • Observation of learning activities • Group project portfolio on preparation of water conservation structures.	Garden tools such as jembes, fork jembes, spade, panga, 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	• 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.	Learners to initiate *one-tree project* in or near the school.

			Print materials with information and photos on agroforestry.	
2.0 Crop Production	2.1 Preparation of Planting site	• 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 jembes, pangas and slashers	Learners to initiate display sites/crop museum in or near the school.
	2.2 Crop establishment	• Written tests • Graded observation of group work activities • Project portfolio in establishment of a crop on the prepared planting site.	Samples of seeds and vegetative planting materials (both appropriate and inappropriate) for learners to select the right ones for sowing or planting. Digital devices and related accessories. Garden tools and equipment such hoes, panga, planting line and tape measure.	

	2.3 Crop management	• 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	• 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	• 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	• Written assignment • Graded observation • Oral assessment on animal rearing practices.	Photos and video clips on domestic animals and farm with domestic animals.	

			Video clips on management practices of pets.	
4.0 Agriculture and Technology	4.1 Off-season cropping techniques	• Graded oral assessment • Written tests • Project journal on construction and establishment of framed suspended garden.	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, gardening tools and equipment. Materials for constructing framed suspended gardens: pieces of wood, wire and strings, containers.	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	• Oral assessment • Written tests • Graded observation on learner project activities and participation levels.	Crop produce that can be used for value addition, examples: potatoes, mangoes, vegetables, cassava, groundnuts, simsim, sweet potatoes, pumpkins. Utensils such as frying pan, spoons and knives.	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 planting 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.