REPUBLIC OF KENYA

MINISTRY OF EDUCATION

JUNIOR SCHOOL CURRICULUM DESIGN
AGRICULTURE

FOR LEARNERS WITH HEARING IMPAIRMENT

GRADE 9

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

A Skilled and Ethical Society

First published 2024

ISBN:

Published and printed by Kenya Institute of Curriculum Development

FOREWORD

The Government of Kenya is committed to ensuring that policy objectives for Education, Training and Research meet the aspirations of the Constitution of Kenya 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, Primary and Junior School levels.

The implementation of Competency Based Curriculum involves monitoring and evaluation to determine its success. After the five-year implementation cycle, a summative evaluation of the primary education cycle was undertaken to establish the achievement of learning outcomes as envisaged in the Basic Education Curriculum Framework. The Government of Kenya constituted a Presidential working Party on Education Reforms (PWPER) in 2022 to address salient issues affecting the education sector. PWPER made far reaching recommendations for basic education that necessitated curriculum review. The recommendations of the PWPER, monitoring reports, summative evaluation, feedback from curriculum implementers and other stakeholders led to rationalization and review of the basic education curriculum.

The reviewed Grade nine curriculum designs for learners with hearing impairment build on competencies attained by learners at Grade eight. Emphasis at this grade is the development of skills for exploration and making informed decision on pathways based on careers.

The curriculum designs present National Goals of Education, essence statements, general and specific expected learning outcomes for the 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, 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.

HON. EZEKIEL OMBAKI MACHOGU, CBS
CABINET SECRETARY,
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PREFACE

The Ministry of Education (MoE) nationally implemented Competency Based Curriculum (CBC) in 2019. Grade seven is the first grade of Junior school while Grade 9 is the final grade of the level in the reformed education structure.

The reviewed Grade nine curriculum furthers implementation of the CBC from Grade eight. The curriculum provides opportunities for learners to focus in a field of their choice to form a foundation for further education and training and/or gain employable skills. 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 nine curriculum designs for learners with hearing impairment 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. They 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 Grade nine and prepare them for smooth transition to Grade Senior school. Furthermore, it is my hope that teachers will use the adapted 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 and review 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)2017, that responds to the demands of the 21st Century and the aspirations captured in the Constitution of Kenya 2010, the Kenya Vision 2030, East African Community Protocol, International Bureau of Education Guidelines and the United Nations Sustainable Development Goals (SDGs).

KICD receives its funding from the Government of Kenya to facilitate 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 revised Grade nine curriculum designs for learners with hearing impairment were developed and adapted with the support of the World Bank through the Kenya Primary Education Equity in Learning Programme (KPEELP); a project coordinated by MoE. Therefore, the Institute is very grateful for the support of the Government of Kenya, through the MoE and the development partners for policy, resource and logistical support. Specifically, special thanks to the Cabinet Secretary-MoE and the Principal Secretary – State Department of Basic Education,

I 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 and adaptation of the Grade nine curriculum designs for learners with hearing impairment. In relation to this, I 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 and adapting these designs. Finally, I am very grateful to the KICD Council Chairperson and other members of the Council for very consistent guidance in the process.

I assure all teachers, parents and other stakeholders that this curriculum design will effectively guide the implementation of the CBC at Grade nine and preparation of learners with hearing impairment for transition to Senior school.

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TABLE OF CONTENT

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-fulfilment

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.

LESSON ALLOCATION

S/ No.	Learning Area	No. of Lesson
1	English for Learners with Hearing Impairment	5
2	Kiswahili for Learners with Hearing Impairment	4
3	Mathematics for Learners with Hearing Impairment	5
4	Religious Education	4
5	Integrated Science for Learners with Hearing Impairment	5
6	Agriculture for Learners with Hearing Impairment	4
7	Social Studies for Learners with Hearing Impairment	4
8	Creative Arts and Sports for Learners with Hearing Impairment	5
9	Pre- technical Studies for Learners with Hearing Impairment	4
10.	Pastoral/ Religious Instruction Programme	1
	Total	**41**

LEARNING OUTCOMES FOR JUNIOR SCHOOL

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

1. Apply literacy, numeracy and logical thinking skills for appropriate self-expression.
2. Communicate effectively using sign language, 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

Agriculture and nutrition for learners with hearing impairment is a learning area that anchors on the United Nation Sustainable development goals and the socio-economic pillar of Kenya Vision 2030 to promote health, hygiene, food and nutrition security through education. It is an integrated learning area comprising agriculture and home science concepts introduced in the upper primary curriculum. The learners with hearing impairment will deepen the acquired knowledge, skills, attitudes and values in conservation of resources, food production, hygiene and innovative production techniques. The curriculum will enrich learner's competencies in conservation of resources, crop and animal production, foods and nutrition, personal and environmental hygiene, basic clothing construction and laundry work. Agriculture and nutrition curriculum will form a foundation for specialisation in respective career pathways in senior school and beyond.

Agriculture and Nutrition for learners with hearing impairment in Junior School level will build on competencies introduced in the Upper Primary curriculum contributing to human capacity development. Learning experiences have been adapted and broken down to smaller deliverable steps to suit learners with Hearing Impairment. The suggested methods of instruction include: Inquiry based learning (IBL), Project based learning (PBL), Problem based learning (PBL) and pedagogical content knowledge (PCK) where more emphasis has been put on total communication as a mode of instruction in order to benefit both learners who are deaf and hard of hearing. The curriculum will focus on developing knowledge, skills, attitudes and values for conservation of resources, food production, hygiene and production techniques through innovative and adaptive technologies. The acquired knowledge, skills, attitudes and values will form a broad-spectrum foundation for development of agricultural competencies for senior school and beyond.

This design has been adapted to ensure that learners who are Deaf and those who are hard of hearing learn effectively. The adaptations include suggestions for provision of captioned videos, sign language interpretation, use of digital devices with assistive technology, models, hands on demonstrations and adapted learning resources

GENERAL LEARNING OUTCOMES

a) Participate actively in agricultural and household activities in conservation of resources.

b) Use scarce resources through innovative practices to contribute towards food and nutrition security.

c) Engage in food production processes for self-sustainability, health and economic development.

d) Adopt personal and environmental hygiene practices for healthy living.

e) Apply appropriate production techniques, innovative technologies, digital and media resources to enhance sustainable agricultural and household practices.

f) Appreciate agricultural and household skills as a worthy niche for hobby, career development, further education and training.

SUMMARY OF STRANDS AND SUB STRANDS GRADE 9

S/N	STRANDS	SUB STRANDS
1.0	**Conservation of Resources**	1.1 Conserving Animal Feed: Hay
		1.2 Conserving Left-over Foods
		1.3 Integrated Farming
		1.4 Conserving Wild Animals
2.0	**Food Production Processes**	2.1 Organic Gardening Techniques
		2.2 Storage of crop produce
		2.3 Cooking: Using Flour Mixtures
3.0	**Hygiene Practices**	3.1 Cleaning waste disposal facilities
		3.2 Disinfecting household articles
4.0	**Production Techniques**	4.1 Grafting in plants
		4.2 Home-made sun drier and cooler

STRAND 1.0: CONSERVATION OF RESOURCES

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
CONSERVATION OF RESOURCES	**1.1 Conserving Animal Feed: Hay** (Baled hay making, standing forage, stacking). (12 lessons)	By the end of the sub strand, the learner should be able to; a) sign words related to methods of conserving forage in coping with drought, b) describe methods of conserving forage in coping with drought, c) conserve forage to cope with drought, d) adopt conservation of forage in coping with drought.	● In purposive groups, learners are guided to use print and non-print media to search words related to methods of conserving forage in coping with drought. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to methods of conserving forage in coping with drought. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. ● In groups, learners are guided to share experiences on methods of conserving forage in coping with drought. Ensure learners are seated in an appropriate arrangement that supports the use of bilingual communication during the discussion with both the hard of hearing and the deaf learners. ● In groups, learners are guided to prepare charts and make class presentations on methods of conserving forage in coping with	1. How can hay conservation contribute to coping with drought? 2. Why do households conserve forage?

			drought Correct any mistakes made after the presentations. ● In groups, learners are guided to watch a video with captions or labelled pictorials on methods of conserving forage in coping with drought. Pause the video occasionally to allowing the learner to take notes and to further elaborate on the information presented. Additionally, playing the video multiple times is advisable for better comprehension. ● In groups, learners are guided to observe a simulated demonstration on how to conserve forage using methods such as stacking or box bailing using locally available materials such as maize stover and straw to conserve hay for drought season. Ensure learners are provided with sign language interpretations and assistive hearing aids to help them interact with the community during the visit. ● In pairs, learners are guided to conserve forage using methods such as stacking or box bailing using locally available materials such as maize stover and straw to conserve hay for drought season. Guide the learners to use personal protective equipment to avoid injuries.	

			• In groups, learners guided to discuss and make class presentations on how households can adopt conservation of forage in coping with drought.	

Core competencies to be developed:

- Critical thinking and problem solving: The learner develops evaluation and decision-making skills as they analyse the drought problem and apply the most applicable solution in the local context.
- Communication and collaboration: The learner develops signing and teamwork skills as they discuss ways of coping with drought in the context of rearing animals.

Values:

- Unity: as the learner respects other's opinion during group discussion and class presentations on how households can adopt conservation of forage in coping with drought.

Pertinent and contemporary issues:

- Disaster risk reduction: The learner analyses drought-related challenges in animal production and adopts coping mechanisms.

Links to other learning areas:

- Learners relate conservation of hay to concepts of mitigating effects of climate change learnt in Social Studies.

Suggested Learning Resources

- Digital devices.
- Sign language dictionary.
- Baled Hay.
- Stacked forage.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
CONSERVATION OF RESOURCES	**1.2 Conserving Left-over Foods** (Reheating or preparing another recipe to avoid wastage) (11 lessons)	By the end of the sub strand, the learner should be able to; a) sign words related to conserving left-over foods at home, b) explain the importance of conserving left-over foods at home, c) prepare left-over foods to avoid wastage, d) embrace the use of leftover foods to avoid food wastage.	● In purposive groups, learners are guided to use print and non-print media to search for words related to conserving left over foods at home. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to conserving left over foods at home. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. ● In purposive groups, learners are guided to share experiences on the importance of conserving left-over foods at home. Ensure learners are seated in an appropriate arrangement that supports the use of bilingual communication during the discussion with both the hard of hearing and the deaf learners. ● In groups, learners are guided to prepare charts and make class presentation on importance of conserving left-over foods at home. Correct any mistakes made after the presentations.	1. How is left over food prepared for use to prevent food wastage? 2. Why is it important to conserve leftover foods at home?

			• In groups, learners watch a video with captions or labelled pictorials on recipes of left-over foods. . Occasionally pause the video, allowing the learner to take notes and to further elaborate on the information presented. Additionally, playing the video multiple times is advisable for better comprehension. • In groups, learners are guided to prepare leftover foods for consumption through methods. Guide the learners to use personal protective equipment to avoid injuries. • In groups, learners make presentations on various recipes adopted from left-over foods to avoid food wastage.	

Core competencies to be developed:

- Critical thinking and problem solving: The learner develop assessment and decision-making skills as they assess the environment to identify ways of conserving left-over food.
- Creativity and imagination: Experimenting skills as the learner explore different ways of preparing left over foods.

Values:

- Unity: as the learner works together with peers to conserve left-over foods.
- Integrity: as the learner avoids wasteful use of resources.

Pertinent and contemporary issues:

- Environmental awareness and protection: The learner analyses and designs ways conserving left over foods.
- Hygiene: The learner handles food to prevent wastage and contamination.

Links to other Learning areas:

- The learner relates conservation of leftover foods to spread of food related communicable diseases learnt through Integrated Science.

Suggested Learning Resources:

- Digital devices.
- Sign language dictionary.
- Sample recipes.
- Realia - Leftover foods *(suitable for purpose).*
- Cooking tools and equipment (*improvise or substitute as much as possible).*
- Cookers/stoves *(choose which one is suitable*).
- Food storage equipment *(choose which one is locally available for use).*
- Food safe.
- Cupboard.
- Charcoal cooler.
- Refrigerators.
- Roasting grills.
- Grills.
- Steamers.
- Skewers.
- Roasting dishes.
- Serving dishes.
- Source of fuel.
- Water,
- Detergents.
- Cleaning cloths/wipers.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
1.0 CONSERVATION OF RESOURCES	**1.3 Integrated Farming** • *Components of integrated farming in conserving resources.* • *Model of integrated farming for conservation of resources*. (12 lessons)	By the end of the sub strand, the learner should be able to; a) sign words related to components of integrated farming in conserving resources, b) describe components of integrated farming in conserving resources, c) make a model of integrated farming for conservation of resources, d) appreciate the importance of integrated farming in conservation of resources.	• In purposive groups, learners are guided to use print and non-print media to search for words related to components of integrated farming that help to conserve resources. Caution learners to observe proper cyber ethics while conducting online searches. • In pairs, learners are guided to practice to fingerspell and sign words related to components of integrated farming that help to conserve resources. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. • In purposive groups, learners are guided to share experiences on components of integrated farming in conserving resources. Ensure the discussions are based on bilingual communication to suit all learners, and provide learners with guiding questions to moderate the discussion. • In groups, learners are guided to watch a video with captions or	1. How can integrated farming conserve resources? 2. Why do we practise integrated farming?

			labelled pictorials on components of integrated farming. Ensure that learners with hearing difficulties are seated at the front. Speak clearly and audibly while explaining information. Encourage the use of hearing aids for these students. ● In purposive groups, learners are guided to take an expedition within the school and community to find out how components of integrated farming help to conserve resources. ● In groups, learners are guided to design and make a model to illustrate integrated farming components such as fish rearing, rabbit keeping, poultry keeping and vegetable production on the same plot of land to show their relational benefits. ● In groups, learners are guided to make class presentations on the models of integrated farming and the importance of the integration in conserving resources. Correct any mistakes made after the presentations.	

Core competencies to be developed:

- Creativity and imagination: Observation and making connection skills are developed as the learner seeks information, designs and makes a model to depict integrated farming enterprise.
- Critical thinking and problem solving**:** Evaluation and decision-making skills are developed as the learner analyses the environment for components of integrated farming and design models of integrated farming enterprise.

Values:

- Unity: as the learner works with group members in designing and making an integrated farming model.
- Respect: as the learner appreciates other's opinions while conducting activities in integrated farming.

Pertinent and contemporary issues:

- Environmental awareness and protection: as learners re-use locally available resources such as waste pieces of wood, cartons, cardboards and papers to design and make a model of integrated farming enterprise.

Links to other learning areas:

- Learners apply skills of designing and choice of materials learnt in Pre-Technical Studies in the construction of integrated farming model.

Suggested Learning Resources:

- Digital device.
- Sign Language Dictionary.
- Model of integrated farming.
- Manila papers.
- Felt pen.
- Glue.
- Scissors.
- Cartons.
- Cardboards.
- Soil - loam, clay and sand.
- Strings.
- Grass clippings.
- Pieces of wood.
- Hand saw.
- Reference materials in print.
- Garden tools and equipment - jembe, panga.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to sign words related to conservation of resources	Signs words related to conservation of resources with great level of accuracy and fluency in the production of signs	Signs words related to conservation of resources with accuracy and clear production of signs	Signs words related to conservation of resources with inconsistency and shows basic level of fluency in the production of signs	Signs words related to conservation of resources with significant errors in articulation and fluency in the production of signs
Ability to describe various ways of conserving resources.	Describes three ways of conserving resources (conserving hay, conserving leftover food, using integrated farming) with elaborate details.	Describes three ways of conserving resources (conserving hay, conserving leftover food, using integrated farming).	Describes two ways of conserving resources (conserving hay, conserving leftover food, using integrated farming).	Describes less than two ways of conserving resources (conserving hay, conserving leftover food, using integrated farming).
Ability to apply various ways of conserving resources.	Applies three ways of conserving resources (conserving hay, conserving leftover food, using integrated farming) creatively and innovatively.	Applies three ways of conserving resources (conserving hay, conserving leftover food, using integrated farming).	Applies two ways of conserving resources (conserving hay, conserving leftover food, using integrated farming).	Applies less than two ways of conserving resources (conserving hay, conserving leftover food, using integrated farming).
Ability to demonstrate responsibility in conservation of resources.	Demonstrates more than three indicators of responsibility (offers leadership, observes safety, and shows initiative to solving problems) in tasks assigned in conservation of resources.	Demonstrates three indicators of responsibility (offers leadership, observes safety, and shows initiative to solving problems) in tasks assigned in conservation of resources.	Demonstrates two indicators of responsibility (offers leadership, observes safety, and shows initiative to solving problems) in tasks assigned in conservation of resources.	Demonstrates less than two indicators of responsibility (offers leadership, observes safety, and shows initiative to solving problems) in tasks assigned in conservation of resources.

2.0 FOOD PRODUCTION PROCESSES

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
2.0 FOOD PRODUCTION PROCESSES	**2.1 Organic Gardening Techniques** *(Use of organic manure, organic pesticides, mechanical weed control, and use of organic foliar feed made from animal wastes and plants like Mexican sunflower.)* (14 lessons)	By the end of the sub-strand the learner should be able to: a) sign words related to organic gardening practices, b) explain organic gardening practices in crop production, c) grow a crop using organic gardening practices, d) appreciate the importance of organic gardening in production of healthy foods.	• In purposive groups, learners are guided to use print and non-print media to search words related to organic gardening practices. Caution learners to observe proper cyber ethics while conducting online searches. • In pairs, learners are guided to practice to fingerspell and sign words related to organic gardening practices. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. • In purposive groups, learners are guided to discuss and make summary notes about organic gardening practices in crop production. Ensure the seating arrangement supports clear communication for learners using sign language. • In groups, learners are guided to watch a video with captions or labelled pictorials on organic gardening practices. In cases where videos are not captioned, ensure the videos are supported by sign language interpretation and pause to allow the learner ample time to follow and interpret the videos. Probe with	1. Why should we practise organic gardening? 2. How can we produce food crops through organic gardening?

			questions to elicit response and enhance comprehension. ● In groups, learners are guided to grow a selected short season crop such as a vegetable, legume or spice crop using organic gardening practices. Guide the learners to use personal protective equipment to avoid injuries. ● In groups, learners are guided to share experiences through class presentations to appreciate the importance of organic gardening in production of healthy foods. Maintain eye contact while using speech together with signs and fingerspelling to benefit both the Hard of Hearing and the Deaf learners.	
Core competencies to be developed: ● Learning to learn: learners develop the skill of organising own learning as they engage the community and learn techniques of growing crops without use of agro-chemicals. ● Self-efficacy: as learners execute their plans in preparation and use of organic foliar feed in organic farming practices.				
Values: ● Unity: as learners work as a team and cooperate with the community to acquire information on organic farming practices. ● Peace: as learners work in consultation and harmony in the organic farming practices.				
Pertinent and contemporary issues: ● Food health and safety: as learners acquire skills of growing foods without use of agro-chemicals.				
Links to other subjects: ● Learners relate organic gardening practices to farming practices in the Social Studies.				

Suggested Learning Resources:

- Digital devices,
- Sign language dictionary,
- Pictures of organic farming practices.
- Non-food green manure plant such as Mexican sunflower.
- Garden tools and equipment - Pangas, slasher, wheelbarrow, jembe, fork jembe, garden line.
- Bucket.
- Manure.
- Planting materials - seeds, seedlings or cuttings.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
FOOD PRODUCTION PROCESSES	**2.2 Storage of crop produce** *(preparing storage structures for crops, manage stored crop produce)* (10 lessons)	By the end of the sub-strand the learner should be able to: a) sign words related to ways of preparing storage structures of crop produce, b) explain ways of preparing storage structures before storing crop produce, c) prepare an existing storage structure in readiness for storing crop produce, d) manage stored crop produce to reduce spoilage, e) show responsibility in managing stored crop produce to reduce spoilage.	● In purposive groups, learners are guided to use print and non-print media to search words related to ways of preparing storage structures of crop produce. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to ways of preparing storage structures of crop produce. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. ● In groups, learners are guided to observe pictures of storage structures in readiness for storage of crop produce and share findings in plenary. Ensure the seating arrangement supports clear communication for learners using sign language. ● In groups, learners are guided to watch a captioned video on preparation of storage structures. In cases where videos are not captioned, ensure the videos are supported by sign language interpretation and pause to allow the learner ample time to follow and interpret the videos. ● In groups, learners are guided to observe a demonstrated on how to prepare an existing storage structure or facility	1. How can we prepare a facility in readiness for storage of crop produce? 2. How should crop produce be managed during storage?

			(container, store room, granary, storage bags) in readiness for storage through practices such as *cleaning, dusting, sealing cracks, repairing leakages, emptying previous crop produce and controlling rodents.* ● In pairs, learners are guided to prepare an existing storage structure or facility *(container, store room, granary, storage bags)* in readiness for storage through practices such as *cleaning, dusting, sealing cracks, repairing leakages, emptying previous crop produce and controlling rodents.* ● In groups, learners are guided to manage stored crop produce (checking moisture content in cereals and pulses, ensuring ventilation, controlling rodents, turning the stored crop produce and disposing off spoilt produce).	
Core competencies to be developed: ● Critical thinking and problem solving: open-mindedness and creativity skills are developed as learners prepare storage structure and manage crop produce to maintain quality and reduce post-harvest loss. ● Communication and collaboration: self-expression and listening skills are developed as learners discuss on preparation of a store structure for storage of food.				
Values: ● Responsibility: as learners manage hygiene of the school food store. ● Unity: as learners play team roles in preparation of a food store.				
Pertinent and contemporary issues: ● Food safety and security: as learners address wastage of crop produce through use of proper storage structures.				
Links to other subjects: ● Learners relate management of storage of crop produce to farming as an economic activity learnt in Social Studies.				

Suggested Learning Resources:

- Digital devices,
- Sign language dictionary,
- Pictures of storage structures.
- Crop produce - maize grains, beans.
- Cleaning equipment.
- Appropriate Pesticide / Rat metal guards.
- Crop storage structures such as containers, airtight bags, drums, sacks, pots, modern store rooms, granaries.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
FOOD PRODUCTION PROCESSES	**2.3 Cooking: Using Flour Mixtures** (Batters, Dough) (14 lessons)	By the end of the sub-strand, the learner should be able to; a) sign terminologies related to types of flour mixtures used in food production, b) prepare flour mixtures for food production, c) make products from various flour mixture, d) appreciate products made from various flour mixtures.	● In purposive groups, learners are guided to use print and non-print media to find words related to types of flour mixtures. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to types of flour mixtures. ● In purposive groups, learners are guided to observe pictures or captioned video on types of flour mixtures used in food production. Ensure the seating arrangement supports clear communication for learners using sign language. ● In groups, learners are guided to observe a demonstration on how to prepare flour mixtures for food production. ● In pairs, learners are guided to prepare flour mixtures for food production and display the mixtures in class for peer review. Maintain eye contact while using speech together with signed and fingerspelling to benefit both the Hard of Hearing and the Deaf learners respectively. ● In pairs, learners are guided to observe demonstration on how to make products such as pan cake, mandazi and chapati from various flour mixtures.	1. How can we make products from flour mixture? 2. Why do we make flour mixtures?

			● In groups, learners are guided to make products such as pan cake, mandazi and chapati from various flour mixtures.	

Core competencies to be developed:

- Communication and Collaboration: the skills of observing, signing and teamwork are developed as learners work together in groups to make flour mixtures.
- Learning to learn**:** the skill of reflection of one's own work is developed as learners apply procedures of making flour mixtures.

Values:

- Unity: as learners work together in groups to make flour mixtures.
- Integrity: as learners use ethically acceptable products to prepare foods.

Pertinent and contemporary issues:

- Safety in the use of tools and equipment: as learners use utensils and other equipment to make flour mixtures
- Food security**:** as learners use different flour mixture to cook food.

Links to other subjects:

- Learners relate measurement of ingredients in preparing flour mixtures to weights and measurements learnt in Mathematics.

Suggested Learning Resources:

- Digital devices.
- Sign language dictionary.
- Flour mixture such as batters and doughs.
- Eggs.
- Wheat flour.
- Raising agents - baking powder/yeast.
- Milk.
- Salt.
- Sugar.
- Kitchen equipment - whisk, mixing bowls, wooden spoon, oven, frying pan, slotted/draining spoon.
- Fuel.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to sign words related to food production.	Signs words related to food production with great level of accuracy and fluency in the production of signs	Signs words related to food production with accuracy and clear production of signs	Signs words related to food production with inconsistency and shows basic level of fluency in the production of signs	Signs words related to food production with significant errors in articulation and fluency in the production of signs
Ability to describe food production processes at household level.	Describes three food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) with elaborate details.	Describes three food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) at household level.	Describes two food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) at household level.	Describes less than two food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) at household level.
Ability to carry out food production processes at household level	Carries out three food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) with creativity and innovative approaches.	Carries out three food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) at household level.	Carries out two food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) at household level.	Carries out less than two food production processes (organic gardening, storage of crop produce and cooking using flour mixtures) at household level.
Ability to portray unity while carrying out food production processes.	Portrays more than three indicators of unity (sharing of available resources, appreciating efforts of others in task and embracing team spirit) in carrying out assigned tasks.	Portrays three indicators of unity (sharing of available resources, appreciating efforts of others in task and embracing team spirit) in carrying out assigned tasks.	Portrays two indicators of unity (sharing of available resources, appreciating efforts of others in task and embracing team spirit) in carrying out assigned tasks.	Portrays less than two indicators of unity (sharing of available resources, appreciating efforts of others in task and embracing team spirit) in carrying out assigned tasks.

3.0 HYGIENE PRACTICES

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
HYGIENE PRACTICES	**3.1 Cleaning waste disposal facilities** *(Waste bin, sink and open drains.)* (9 lessons)	By the end of the sub-strand the learner should be able to: a) sign words related to cleaning waste disposal facilities, b) explain importance of cleaning waste disposal facilities, c) clean waste disposal facilities at household level, d) adopt use of clean waste disposal facilities at household level.	● In purposive groups, learners are guided to use print and non-print media to search words related to cleaning waste disposal facilities. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to cleaning waste disposal facilities. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. ● In purposive groups, learners are guided to discuss and share experiences on the importance of cleaning waste facilities equipment. Ensure the seating arrangement supports clear communication for learners using sign language. ● In groups, leaners are guided to prepare charts and make class presentations on the importance of cleaning waste facilities equipment. ● In groups, learners observe a demonstration on how to clean waste disposal facilities. ● In groups, learners are guided to clean waste disposal facilities such as dust bin, sink and open drains. Guide the learners	1. How do cleaning waste disposal facilities promote hygiene? 2. Why do we clean waste disposal facilities?

			to use personal protective equipment to avoid injuries.	

Core competencies to be developed:

- Critical thinking and problem solving: Problem solving skills are developed as learners identify the waste facilities and clean them.
- Self-efficacy: the skill of self-awareness and planning is developed as learners clean waste disposal facilities.

Values:

- Responsibility: as the learner takes initiative to maintain cleanliness.

Pertinent and contemporary issues:

- Environmental awareness and protection: As the learner analyses and design ways of cleaning waste facilities.
- Hygiene**:** As the learner maintains cleanliness of waste facilities.

Links to other subjects:

- Learners relate cleaning of waste disposal facilities to aspects of good health learnt in Integrated Science.

Suggested Learning Resources:

- Digital devices.
- Sign language dictionary.
- Waste bin.
- Sinks.
- Soap.
- Brush.
- Water.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
HYGIENE PRACTICES	**3.2 Disinfecting household articles** (Sunlight, salting, boiling, use of antiseptics and ironing) (12 lessons)	By the end of the sub-strand the learner should be able to: a) sign words related to disinfecting household articles, b) describe methods of disinfecting a household article, c) carry out disinfection of a household, d) appreciate the importance of disinfecting household articles for hygiene purposes.	● In purposive groups, learners are guided to use print and non-print media to words related to disinfecting household articles. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to disinfecting household articles. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. ● In groups, learners are guided to watch a captioned video and make summary notes on methods of disinfecting household articles. Occasionally pause the video, allowing the learner to take notes and to further elaborate on the information presented. Additionally, playing the video multiple times is advisable for better comprehension. ● In groups, learners are guided to discuss and share experiences on methods of disinfecting household articles. Ensure the seating arrangement supports clear communication for learners using sign language. ● In groups, learners are guided to prepare charts and deliver a class presentation on methods of disinfecting household articles.	1. How can we disinfect household articles for hygiene purposes? 2. Why do we disinfect household articles?

			● In groups, learners are guided to observe a simulated demonstration on how to disinfect household articles. ● In groups, learners are guided to disinfect household articles like aprons, gloves, towels, dust coats, handkerchiefs, and socks among other personal items using methods. Guide the learners to use personal protective equipment to avoid injuries. ● In groups, learners are guided to discuss and make class presentations on the importance of disinfecting household articles for hygiene purposes. Ensure the seating arrangement supports clear communication for learners using sign language.	

Core competencies to be developed:

- Learning to learn: learners develop the skill of organising their own learning as they search for information or observe demonstrations on methods of disinfecting household articles.
- Critical thinking and problem solving: evaluation and decision-making skills are developed as learners apply disinfection procedures to prevent communicable diseases.
- Communication and collaboration**:** Signing and teamwork skills are developed as learners work in groups to disinfect household articles.

Values:

- Responsibility: as the learner takes care and disinfects personal items and household articles.

Pertinent and contemporary issues:

- Personal hygiene: as the learner disinfects personal articles to prevent communicable diseases.

Links to other learning areas:

- Learners relate use of disinfectants to solvents learnt in Integrated Science.

Suggested Learning Resources:

- Digital devices.

- Sign language dictionary.
- Disinfectants.
- Salt.
- Ironing box.
- Personal articles such as handkerchief, apron, gloves and towel.
- Reference print materials.
- Soap.
- Brush.
- Water.
- Antiseptics.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to sign words related to hygiene practices.	Signs words related to hygiene practices with great level of accuracy and fluency in the production of signs	Signs words related to hygiene practices with accuracy and clear production of signs	Signs words related to hygiene practices with inconsistency and shows basic level of fluency in the production of signs	Signs words related to hygiene practices with significant errors in articulation and fluency in the production of signs
Ability to explain hygiene practices at household level.	Explains cleaning waste disposal activities and disinfecting household articles at household level with elaborate details.	Explains cleaning waste disposal activities and disinfecting household articles at household level.	Explains either cleaning waste disposal activities or disinfecting household articles at household level.	Explains cleaning waste disposal activities or disinfecting household articles at household level with details that require correction.
Ability to carry out hygiene practices at household level.	Carries out cleaning waste disposal activities and disinfecting household articles with observable attention to details.	Carries out cleaning waste disposal activities and disinfecting household articles at household level.	Carries out cleaning waste disposal activities or disinfecting household articles at household level.	Carries out cleaning waste disposal activities or disinfecting household articles at household level with observable areas for corrections.
Ability to portray responsibility when carrying out hygiene practices.	Learner portrays more than three indicators of responsibility by engaging in assigned roles, observing safety, and proactively solving problems when carrying out hygiene practices.	Learner portrays three indicators of responsibility by engaging in assigned roles, observing safety and proactively solves problems when carrying out hygiene practices.	Learner portrays two indicators of responsibility by engaging in assigned roles, observing safety or proactively solves problems when carrying out hygiene practices.	Learner portrays less than two indicators of responsibility by engaging in assigned roles, observing safety or proactively solves problems when carrying out hygiene practices.

4.0 PRODUCTION TECHNIQUES

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
4.0 PRODUCTION TECHNIQUES	**4.1 Grafting in plants** (plant propagation by grafting,) (13 lessons)	By the end of the sub-strand, the learner should be able to; a) sign words related to grafting as a method of plant propagation, b) describe grafting as a method of plant propagation, c) carry out grafting for various purposes, d) take care of the grafted plant to ensure successful union, e) appraise grafting for aesthetics, repair, improvement and rejuvenation purposes.	● In purposive groups, learners are guided to use print and non-print media to search words related to grafting as a method of plant propagation. Caution learners to observe proper cyber ethics while conducting online searches) ● In pairs, learners are guided to practice to fingerspell and sign words related to grafting as a method of plant propagation. In the absence of mainstream signs, learners are guided to harmonise meaningful signs for communication purposes. ● In groups, learners are guided to take an expedition in the school to observe and identify major characteristics of grafted plants. ● In purposive groups, learners are guided to discuss and make summary notes on grafting as a method of plant propagation. ● In groups, learners are guided to watch a captioned video on how to carry out grafting in plants. ● In groups, learners are guided to observe a demonstration on carrying out grafting in plants for	1. Why is grafting done on a plant? 2. How is grafting done in plants?

			repair, aesthetic, rejuvenation or improvement purposes. ● In groups, learners are guided to carry out grafting in plants for repair, aesthetic, rejuvenation or improvement purposes. ● In groups, learners are guided to engage a resource person on grafting in plants for repair, aesthetic, rejuvenation or improvement purposes. Ensure learners are provided with sign language interpretations and assistive hearing aids to help them interact with the resource person during the tasks. ● In groups, learners are guided to carry out caring practices such as watering, protecting the union, removal of the graft tape after successful union, removal of other buds on the root stock. Ensure the arrangement supports clear communication for learners using sign language. ● In groups, learners are guided to appraise grafting for reasons of *repairing a damaged plant, aesthetic, rejuvenation and plant improvement.*	

Core competencies to be developed:

- Learning to learn: learners develop the skill of reflection on their own work as they evaluate success on the grafted plant for rejuvenation, aesthetics, repair or improvement of existing plant.
- Self-efficacy: learners develop the skill of self-awareness through manipulation of a plant through grafting for plant propagation.

Values:

- Respect: as the learner recognizes other's abilities and skills as learners carry out grafting techniques with varied degrees of success.
- Responsibility: as the learner undertakes tasks in the grafting practical activity.

Pertinent and contemporary issues:

Safety of self and others: as learners handle and use sharp grafting tools and equipment to ensure their own safety and that of others.

Links to other subjects:

- Learners relate carrying out grafting to parts of a plant and relationship between plants learnt in Integrated Science.

Suggested Learning Resources:

- Digital devices
- Sign language dictionary
- Pictures of grafting.
- Suitable seedlings for grafting - compatible rootstocks and scions.
- Grafting tools and equipment - grafting knife, grafting tape/polythene sheets.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
4.0 PRODUCTION TECHNIQUES	**4.2 Home-made sun drier and cooler** (13 lessons)	By the end of the sub strand, the learner should be able to; a) sign concepts related to materials used for making home - made sun dryer for vegetables, b) describe how to make a home-made sun dryer for vegetables, c) construct a home-made sun dryer to preserve vegetables, d) adopt the use of home-made drier in preservation of vegetables.	● In purposive groups, learners are guided to use print and non-print media to search words related to home - made sun dryer for vegetables. Caution learners to observe proper cyber ethics while conducting online searches. ● In pairs, learners are guided to practice to fingerspell and sign words related to home - made sun dryer for vegetables. In the absence of mainstream signs, learners are guided to harmonize meaningful signs for communication purposes. ● In purposive groups, learners are guided to watch a captioned video or a demonstration on how to make a home-made sun dryer for vegetables. Pause the video occasionally to allowing the learner to take notes and to further elaborate on the information presented. Additionally, playing the video multiple times is advisable for better comprehension. ● In groups, learners are guided to discuss and make summary notes on how to make a home-made sun dryer for vegetables. Ensure learners are seated in an appropriate arrangement that supports the use of bilingual communication during the	1. How can innovative technology be used to preserve vegetables? 2. Why do we preserve vegetables?

			discussion with both the hard of hearing and the deaf learners. ● In groups, learners are guided to prepare charts and make a class presentation on making a home-made sun dryer for vegetables. ● In groups, learners are guided to identify locally available materials to be used in making a home-made sun dryer for vegetables. ● In groups, learners are guided to sketch and design a home-made dryer for drying vegetables using locally available materials. ● In groups, learners are guided to use locally available materials to construct a home-made dryer for drying vegetables and display it in class for peer review. Guide the learners to use personal protective equipment to avoid injuries. ● In groups, learners are guided to use the constructed home-made dryer to dry vegetables. Ensure the seating arrangement supports clear communication for learners using sign language.	
Core competencies to be developed: ● Self-efficacy: learners develop leadership and planning skills as learners design, construct and use home-made devices to preserve milk and vegetables. ● Critical thinking and problem solving: learners develop the skills in assessment or evaluating challenging situations and designing solutions as learners take part in the construction of home-made dryers and coolers.				
Values:				

- Unity: through team work as learners pool ideas and skills to design and construct home-made and sun drier.
- Patriotism: as the learner contributes to solving the community problem of food spoilage in the community by constructing home-made dryers.

Pertinent and contemporary issues:

Food nutrition and security: as the learner uses technology to preserve vegetables to ensure continuous availability.

Links to other subjects:

Learners relate designing and construction of homemade sun dryer to skills learnt in Pre-technical studies on designing, sketching and choice of construction materials.

Suggested Learning Resources:

- Digital devices.
- Sign language dictionary.
- Pictures of home-made dryers.
- Vegetables.
- Wire mesh.
- Nails.
- Ropes.
- Framing materials such as pieces of wood and plastic pipes.
- Clear polythene sheet.
- Screws.
- Plywood.
- Charcoal.
- Black fabric or plastic.
- Foil.
- Lidded box.
- Handsaws.
- Scissors.

Assessment rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to sign words related to production techniques.	Signs words related to production techniques with great level of accuracy and fluency in the production of signs	Signs words related to production techniques with accuracy and clear production of signs	Signs words related to production techniques with inconsistency and shows basic level of fluency in the production of signs	Signs words related to production techniques with significant errors in articulation and fluency in the production of signs
Ability to describe production techniques at household level.	Describes grafting in plants and homemade sun dryer as production techniques at household level with illustrative details.	Describes grafting in plants and homemade sun dryer as production techniques at household level.	Describes either grafting in plants or homemade sun dryer as production techniques at household level.	Describes either grafting in plants or homemade sun dryer with descriptions that need corrections.
Ability to apply out production technique at household level.	Applies grafting in plants and constructs a homemade dryer with observable innovation and creativity.	Applies grafting in plants and constructs a homemade dryer.	Applies either grafting in plants or constructs a homemade dryer.	Applies either grafting in plants or constructs a homemade dryer with observable need for corrections.
Ability to portray unity in applying production techniques at household level.	Portrays unity by showing more than three observable indicators (striving to achieve a common goal, appreciating efforts of others and respecting other people's opinions).	Portrays unity by showing three observable indicators (striving to achieve a common goal, appreciating efforts of others and respecting other people's opinions).	Portrays unity by showing two observable indicators (striving to achieve a common goal, appreciating efforts of others and respecting other people's opinions).	Portrays unity by showing less than two observable indicators (striving to achieve a common goal, appreciating efforts of others and respecting other people's opinions).

APPENDIX 1: GUIDELINES FOR INTEGRATING COMMUNITY SERVICE LEARNING

Introduction

In Grade 9, learners will undertake an integrated Community Service Learning (CSL) project of choice from a single or combined subject. The CSL project will enable the learner to apply knowledge and skills from other subjects to address a problem in the community. The implementation of the integrated CSL project will take a Whole School Approach, where all members of the school community including teachers, school administration, parents/guardians/ local community and support staff. It will be a collaborative effort where the teacher of Social Studies coordinates and works with other subject teachers to design and implement the integrated CSL project. The teachers will select a theme drawn from different Learning Areas and the broader categories of Pertinent and Contemporary Issues (PCIs) for the CSL project. It should also provide an opportunity for development of core competencies and nurturing of values. Learners will undertake a **variety of** integrated CSL group projects in teams of following a 6-step milestone approach as follows:

Milestone	**Description**
Milestone 1	**Problem Identification** Learners study their community to understand the challenges faced and their effects on community members. Some of the challenges in the community can be: • Environmental degradation • Lifestyle diseases, Communicable and non-communicable diseases • Poverty • Violence and conflicts in the community • Food security issues
Milestone 2	**Designing a solution** Learners create an intervention to address the challenge identified.
Milestone 3	**Planning for the Project** Learners share roles, create a list of activities to be undertaken, mobilise resources needed to create their intervention and set timelines for execution

Milestone 4	**Implementation** The learners execute the project and keep evidence of work done.
Milestone 5	**Showcasing /Exhibition and Report Writing** Exhibitions involve showcasing learners' project items to the community and reflecting on the feedback Learners write a report detailing their project activities and learnings from feedback
Milestone 6	**Reflection** Learners review all project work to learn from the challenges faced. They link project work with academic concepts, noting how the concepts enabled them to do their project as well as how the project helped to deepen learning of the academic concepts.

Note: The milestones will be staggered across the 3 terms of the academic calendar.

Assessment of CSL integrated Project

Assessment for the integrated CSL group projects will be conducted formatively. The assessment will consider both the process and end product. This entails assessing each of the milestone stages of the integrated CSL group projects. They will focus on 3 components namely: skills from various learning areas applied in carrying out the projects, core competencies developed and values nurtured.

APPENDIX 2: LIST OF ASSESSMENT METHODS, LEARNING RESOURCES AND NON-FORMAL ACTIVITIES

Strand	Sub Strand	Suggested Assessment Methods	Suggested Non-Formal Activities
CONSERVATION OF RESOURCES	**1.1Conserving animal feed: Hay**	• Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Anecdotal Records. • Written Test. • Oral/signed Questions and Answers.	• Listening to speeches on the importance of conserving animal feeds during an agricultural event. • Presentations on how households can adopt conservation of forage in coping with drought at 4K club.
	1.2 Conserving left over foods	• Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Conserving leftover foods at the environment club. • Performing a skit on Reusing leftover foods at school in drama club.

	1.3 Integrated farming	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Writing articles in school magazines on integrated farming. • Engaging resource persons in discussing integrated farming practices. • Practising integrated farming in Agricultural 4K clubs.
2.0 FOOD PRODUCTION PROCESSES	**2.1 Organic gardening techniques**	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Farm excursions where organic gardening practices are done. • Agricultural Field trips. • Reading journals on organic gardening techniques
	2.2 Storage of crop produce	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Constructing storage facilities at home with parents. • Manage stored food for the agriculture club (4K).

	2.3 Cooking: Using flour mixtures	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Making flour mixtures at home for different wheat products. • Talk to peers about flour mixtures during holidays. • Visit a bakery to identify different flour mixtures.
3.0 HYGIENE PRACTICES	**3.1 Cleaning waste disposal facilities**	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Engaging in cleaning waste disposal facilities within the community. • Making posters on cleaning waste disposal facilities.
	3.2 Disinfecting household articles	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Demonstrating to peers on how to disinfect household articles during holidays. • Listening to a resource person talking about how to disinfect household articles.

4.0 PRODUCTION TECHNIQUES	**4.1 Grafting in plants**	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Organise an event for grafting plants at the 4K club. • Visit ASK shows to observe Agricultural techniques.
	4.2 Home-made sun drier	• Checklist • Observation. • Practical Work. • Assessment Rubrics. • Checklist. • Written Test. • Oral/signed Questions and Answers.	• Preparing home-made sun drier at home or school with parents or peers. • Visit a Jua kali centre to see several sun-driers.