REPUBLIC OF KENYA

MINISTRY OF EDUCATION

JUNIOR SECONDARY SCHOOL CURRICULUM DESIGN

GRADE 7

PRE-TECHNICAL & PRE-CAREER STUDIES

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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FOREWORD

Curriculum is a tool which a country employs to empower its citizens. Kenya Institute of Curriculum Development in meeting its core mandate *'to develop curriculum and curriculum support materials'* has spearheaded curriculum reforms in the education sector. The reforms are based on rigorous research, monitoring and evaluation activities conducted on the outgoing 8-4-4 education to inform the incoming Competency-Based Curriculum through a phase-in phase-out model. The reforms have been informed by summative evaluation survey (2009), needs assessment study (2016) and the Task force Report on re-alignment of Education Sector (2012).

The ongoing curriculum reforms aims at meeting the needs of Kenyan society by aligning the curriculum to the Constitution of Kenya 2010, the Kenya Vision 2030 and the East African Protocol among other policy requirements as documented by the Sessional paper No. 1 of 2019 on 'Reforming Education and Training in Kenya for Sustainable Development'. The reforms adopted the Competency-Based Curriculum (CBC) to achieve development of requisite knowledge, skills, values and attitudes that will drive the country's future generations as documented by the Basic Education Curriculum Framework (BECF). Towards achieving the mission of the Basic Education, Kenya has successfully and progressively rolled out curriculum for the Early Years Education and is currently completing the roll-out for Middle-School Education which comprises Upper Primary and Junior Secondary levels.

It is hoped that the curriculum designs for Grade 7 will guide the teachers among other educational stakeholders for progressive achievement of the curriculum vision which seeks to have engaged, empowered and ethical citizens.

PROF. GEORGE A. O. MAGOHA, MBS, EBS, CBS
CABINET SECRETARY
MINISTRY OF EDUCATION

PREFACE

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

The Grade 7 curriculum designs for the respective learning areas will enable the development of twenty first century competencies. Ultimately, this will help in the realization of the vision and mission of the Competency-Based curriculum as documented in the Basic Education Curriculum Framework (KICD, 2017).

It is my hope that all government agencies among other stakeholders in education will use the designs to guide effective and efficient implementation of the learning activities as well as provide relevant feedback on various aspects of the curriculum. Successful implementation of the Grade 7 curriculum will be a significant milestone towards realization of the curriculum mission 'Nurturing every learner's potential'.

JULIUS JWAN, MBS, (PHD)
PRINCIPAL SECRETARY
STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION
MINISTRY OF EDUCATION

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Agencies (SAGAs) and representatives of various stakeholders for their various roles in the development of the Grade 7 curriculum designs.

I give special thanks to the Cabinet Secretary, Ministry of Education; the Principal Secretary State Department of Early Learning and Basic Education; the Secretary, Teachers' Service Commission (TSC) and the Chief Executive Officer, Kenya National Examinations Council (KNEC) for their support in the process.

Finally, I am grateful to the KICD Governing Council for their consistent guidance during the development of the curriculum designs. The Institute assures all curriculum implementers, parents, and other stakeholders that the designs will ensure effective implementation of the CBC at Grade 7.

PROF. CHARLES O. ONG'ONDO
DIRECTOR/CHIEF EXECUTIVE OFFICER
KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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TIME ALLOCATION

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

NATIONAL GOALS OF EDUCATION

Education in Kenya should:

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

ii) **Promote the social, economic, technological and industrial needs for national development.**
Education should prepare the youth of the country to play an effective and productive role in the life of the nation.

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

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

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

iii) Promote individual development and self-fulfillment

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

iv) Promote sound moral and religious values.

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

v) Promote social equality and responsibility.

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

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

Education should instill in the youth of Kenya an understanding of past and present cultures and their valid place in contemporary society. Children should be able to blend the best of traditional values with the changing requirements that must follow rapid development in order to build a stable and modern society.

vii) Promote international consciousness and foster positive attitudes towards other nations.

Kenya is part of the international community. It is part of the complicated and interdependent network of peoples and nations. Education should therefore lead the youth of the country to accept membership of this international community with all the obligations and responsibilities, rights and benefits that this membership entails.

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

LEARNING OUTCOMES FOR MIDDLE SCHOOL

By the 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

Pre-Technical and Pre-Career studies is a subject that prepares the learner for the Technical & Engineering and Career & Technology Studies (CTS) which are tracks in the Science, Technology, Engineering and Mathematics (STEM) pathway. It is anchored on the recommendations by Session Papers No 1 of 2005 and No 14 of 2012 which recommended the promotion of technical and vocational education with an emphasis on Science, Technology and Innovation (ST&I) in the school curriculum.

It builds on the competencies acquired in Science & Technology and other related learning areas at upper primary school. The subject equips the learner with foundational knowledge, skills, attitudes and values that are a prerequisite in order to specialise in subjects such as metalwork, woodwork, electricity, aviation technology, building construction, power

mechanics, leatherwork, culinary arts, hairdressing & beauty therapy, marine & fisheries, manufacturing and media technology at senior school.

The Pre-Technical and Pre-Career studies subject equips the learner with exploration, imagination, creativity, innovation and hands-on skills through projects and practical activities. Learners also acquire hands-on skills as they are exposed to programs in industries that the school collaborates with. After completing junior secondary school, the learner may select either the Technical and Engineering or CTS track in the STEM pathway at senior school. In making this choice, the learner's interests, abilities and personality will be considered.

LEARNING OUTCOMES FOR PRE-TECHNICAL AND PRE-CAREER STUDIES

By the end of junior secondary, the learner should be able to;
1. Make informed and meaningful career choices in technical and career fields.
2. Apply competencies acquired in workshop safety to prevent accidents and save lives.
3. Use materials and safely dispose waste to promote education for sustainable development.
4. Apply acquired drawing skills to communicate effectively.
5. Apply the acquired competencies to select, use and maintain tools, equipment and materials to support community-based projects.
6. Use available energy resources to solve problems in the community.

STRAND 1.0: SAFETY

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Safety	1.1 Personal safety (7 lessons)	By the end of the sub-strand, the learner should be able to: a) identify potential hazards relating to personal safety in day to day life b) demonstrate safety to self and others while performing tasks in the locality c) handle tools and equipment safely while performing tasks in the locality d) determine the general safety rules and regulations for a given task e) recognize various careers related to safety	Learners are guided to: • discuss the meaning of safety and relate potential hazards to personal safety in day to day life • role-play on how to observe safety while performing simple tasks in the locality • discuss the safety measures to observe when working with others while performing given tasks • handle tools and equipment safely while performing simple tasks • use digital devices to watch and discuss video clips on safety when handling tools and equipment • brainstorm and develop general safety rules and regulations for a given task • explore and identify various careers related to safety • design and perform a task as they practice safety measures related to the task	1. Why is safety important? 2. How do you ensure safety when performing a task?

		f) appreciate the role of safety in day to day life		

Core Competencies to be developed:
- Communication and Collaboration is achieved as learners discuss and carry out group activities.
- Citizenship as learners observe each other's safety when working in groups.
- Imagination and creativity as learners role play on safety when working with others.

Pertinent and Contemporary Issues (PCIs):
- Disaster risk reduction as learners perform tasks while observing safety
- Environmental protection as learners take care of waste materials in the process of practicing safety of self, others, tools and equipment.

Values:
- Social justice as learners observe safety of others while working together.
- Respect as learners recognize the input of every member during discussions.
- Unity as learners work together as a team.
- Responsibility as learners take care of tools and equipment.

Links to other learning areas:
- Health Education as learners safely handle and dispose waste materials in the community

Assessment Rubric				
Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to identify potential hazards in relation to personal safety in day to day life	Correctly identifies all potential hazards in relation to personal safety in day to day life	Correctly identifies most of the potential hazards in relation to personal safety in day to day life	With guidance identifies potential hazards in relation to personal safety in day to day life	Has difficulties in identifying potential hazards in relation to personal safety in day to day life
Ability to demonstrate safety while performing given tasks	Demonstrates safety while performing all given tasks	Demonstrate safety while performing most of the given tasks	Is not consistent in demonstrating safety while performing given tasks	Has difficulties in demonstrating safety while performing given tasks
Ability to observe safety while working with others in the locality	Always observes safety while working with others in the locality	Observes safety while working with others in the locality	Sometimes observes safety while working with others in the locality	Rarely observes safety while working with others in the locality
Ability to handle tools safely while performing tasks in the locality	Correctly handles tools safely while performing tasks in the locality	Most of the time handles tools safely while performing tasks in the locality	Sometimes handles tools safely while performing tasks in the locality	Requires support in handling tools safely while performing tasks in the locality
Ability to determine the	Determines all the general safety rules and	Determines most of the general safety	Can determine some general safety rules and	Has difficulties in determining the

general safety rules and regulations for a given task	regulations for a given task	rules and regulations for a given task	regulations for a given task	general safety rules and regulations for a given task
Ability to recognize various careers related to safety.	Recognizes all various careers related to safety	Recognizes most various careers related to safety	With support, can recognize various careers related to safety	Hardly recognizes various careers related to safety

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Safety	**1.2 Injuries** (5 lessons)	By the end of the sub-strand, the learner should be able to: a) identify types of injuries that may occur in the locality b) identify causes of injuries that may occur in the locality c) relate the type of injury and the corresponding first aid requirements. d) apply safety measures to minimize injuries in the locality e) recognize the careers related to first aid and management of injuries. f) appreciate the importance of observing safety to reduce injuries in the day today activities.	Learners are guided to: • watch video clips on the types of injuries that occur in the locality • discuss and identify the causes of injuries at home, school and locality (cuts, burns, scalds, and minor fractures) • discuss ways of preventing cuts, burns, scalds and minor fractures • visit health facilities to observe the careers related to the management of injuries • role-play first aid procedures on management of cuts, burns, scalds, and minor fractures • discuss ways in which they can reduce injuries while in school, at home or in the community	1. What causes injuries? 2. How can we minimise injuries at the work place?

Core Competencies to be developed:
- Critical thinking and problem solving as learners discuss ways of preventing cuts, burns, scalds and minor fractures
- Self-efficacy as learners express themselves during role playing on first aid

	Digital literacy as learners use digital devices to search and watch video clips on safety practices while performing given tasks.

Pertinent and Contemporary Issues (PCIs):
- Mental health as learners engage in safe practices to avoid injuries in the locality

Values:
- Unity as learners embrace teamwork in groups.
- Respect as learners recognize the input of every member in the group.
- Integrity as learners collect, use, care for, and safely store items and equipment.

Links to other learning areas:
- Integrated science as learners discuss how to perform first aid on cuts and bruises.
- Computer science (ICT applications) as learners watch videos on the types of injuries and first aid.
- Life skills as learners help one another when handling cases on cuts and bruises.

Assessment Rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify types of injuries that may occur at the locality	Identifies all types of injuries that may occur at the locality	Identifies most types of injuries that may occur at the locality	Attempts to identify types of injuries that may occur at the locality	Requires support to identify types of injuries that may occur at the locality
Ability to identify causes of injuries that may occur at the locality	Identifies all causes of injuries that may occur at the locality	Identifies most causes of injuries that may occur at the locality	Attempts to identify causes of injuries that may occur at the locality	Requires support to identify causes of injuries that may occur at the locality

Ability to identify the types of injury and the corresponding first aid requirements.	Accurately relates all the types of injury and the corresponding first aid requirements	Relates most types of injury and the corresponding first aid requirements	Relates some types of injury and the corresponding first aid requirements	Requires guidance to relate the types of injury and the corresponding first aid requirements
Ability to apply safety measures to minimize injuries in the locality	Accurately applies safety measures to minimize injuries in the locality	Applies safety measures to minimize most injuries in the locality	Sometimes applies safety measures to minimize injuries in the locality	Requires support to apply safety measures to minimize injuries in the locality
Ability to recognize the careers related to first aid and management of injuries	Recognizes all the careers related to first aid and management of injuries	Recognizes most of the careers related to first aid and management of injuries	Recognizes some of the careers related to first aid and management of injuries	Has difficulties in recognizing the careers related to first aid and management of injuries

STRAND 2.0: MATERIALS

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
2.0 Materials	**2.1 Common materials** (9 lessons)	By the end of the sub-strand, the learner should be able to; a) identify the common materials found in the locality b) categorize the common materials in the locality into metals and non-metals c) distinguish metallic and non-metallic materials in the locality d) describe the physical properties of common materials found in the locality e) recognize careers related to materials in the locality f) embrace the importance of different materials found in the locality	Learners are guided to: • walk around the locality to identify, collect and record common materials • use a chart to list the common materials in the locality • collect, sort and distinguish metallic and non-metallic materials. • investigate and discuss the physical properties of materials: (color, texture, hardness, shape, fire resistance) • watch videos for categorization and identification of physical properties of materials • tour the locality to identify the various careers related to the use of common materials.	Why are materials important?
Core competencies to be developed;			
• Digital literacy when learners watch video clips to identify the uses of various metals.			

• Communication and Collaboration as learners work in groups.	
• Critical thinking and problem solving as learners distinguish metals and non-metallic materials.	

Pertinent and Contemporary Issues (PCI's):
- Self-awareness as learners interact with the environment
- Disaster risk reduction as learners appreciate characteristics of materials and classify them into safe and unsafe materials

Values:
- Unity as learners work in groups
- Responsibility as learners work with different materials
- Respect as learners acknowledge each other's contributions during group discussions

Links to other learning areas:
- Integrated Science as leaners investigate the physical properties of materials

Assessment Rubric

Indicator	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Ability to identify the common materials found in the locality	Identifies all the common materials found in the locality	Identifies most of the common materials found in the locality	Identifies some of the common materials found in the locality	Requires support to identify the common materials found in the locality
Ability to categorize the common materials in the locality	Categorizes all the common materials in the locality	Categorizes most of the common materials in the locality	Categorizes some of the common materials in the locality	Needs support to categorize the common materials in the locality

Ability to distinguish metallic and non-metallic materials	Distinguishes all metallic and non-metallic materials	Distinguishes most of the metallic and non-metallic materials	Distinguish some of the metallic and non-metallic materials	Has difficulties in distinguishing metallic and non-metallic materials
Ability to describe the physical properties of the common materials found in the locality.	Describes all the physical properties of the common materials found in the locality.	Describes most of the physical properties of the common materials found in the locality.	Describes some of the physical properties of the common materials found in the locality.	Requires support to describe the physical properties of the common materials found in the locality.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
2.0 Materials	**2.2 Metals** (10 lessons)	By the end of the sub-strand, the learner should be able to; a) identify different types of metals in the locality b) describe physical properties of ferrous and non-ferrous metals in the locality c) identify the uses of metals in the locality. d) recognize careers related to use of metals e) appreciate the importance of metals in the locality	Learners are guided to: • develop a checklist for identifying different types of metals • sort metals (as either ferrous or non-ferrous, magnetic or non-magnetic, conductors of heat and electricity) • watch video clips on the various types of metals • discuss the various uses of metals in the locality • discuss careers related to metals under the guidance of a resource person(s).	1. What are metals? 2. Why are metals important?

Core competencies to be developed:
- Digital literacy when learners watch video clips to identify the uses of various metals.
- Communication and Collaboration as learners work in groups.
- Critical thinking and problem solving as learners distinguish ferrous and non-ferrous metals.

Pertinent and Contemporary Issues (PCI's):
- Self-awareness as learners interact with the resource person(s)
- Disaster risk reduction as learners study the characteristics of metals and classify them into useful and non-useful metals

Values:
- Unity as learners work in groups
- Respect as learners acknowledge each other's contribution during group discussions

Links to other learning areas:
- Integrated Science as learners group metals as either magnetic or non-magnetic
- Computer science as learners use digital media to watch video clips on types of metals

Assessment Rubric

Indicator	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Ability to identify different types of metals found in the locality	Identifies all different types of metals found in the locality	Identifies most of the different types of metals found in the locality	Identifies some of the different types of metals found in the locality	Has difficulties in identifying different types of metals found in the locality
Ability to identify physical properties of ferrous and non-ferrous metals commonly found in the locality	Describes all the physical properties of ferrous and non-ferrous metals commonly found in the locality	Describes most of the physical properties of ferrous and non-ferrous metals commonly found in the locality	Describes some of the physical properties of ferrous and non-ferrous metals commonly found in the locality	Requires support to describe the physical properties of ferrous and non-ferrous metals commonly found in the locality
Ability to identify the uses of metals found in the locality.	Identifies all the uses of metals found in the locality.	Identifies most of the uses of metals found in the locality.	Identifies some of the uses of metals found in the locality.	Has difficulties in identifying the uses of metals found in the locality.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
2.0 Materials	**2.3 Non-metallic materials** (10 lessons)	By the end of the sub-strand, the learner should be able to; a) distinguish between synthetic and natural non-metallic materials b) categorize the non-metallic materials as either synthetic or natural non-metallic materials c) describe physical properties of non-metallic materials in the locality d) identify the uses of non-metallic materials in the locality e) recognize careers related to the processing and use of non-metallic materials	Learners are guided to: • research and develop a checklist for classifying non-metallic materials • sort non-metallic materials (as either synthetic or natural) • watch video clips on the various non-metallic materials • discuss the various uses of non-metallic materials in the locality • discuss careers related to non-metallic materials under the guidance of resource person(s).	1. What are non-metallic materials? 2. Why are non-metallic materials important?
	Project activity1 (13 lessons)	By the end of the sub-strand, the learner should be able to; a) identify a problem in their community which requires a	Learners are guided to: • point out and discuss the existing problems in their community that require a solution using	What are the problems in your society that can be solved

		solution using skills in the technical fields b) describe how the problem affects the community c) identify skills needed to solve the problems in the community.	skills in the technical fields. • use digital devices, life testimonies and moral stories to point out problems in their community that require solutions using skills in the technical skills. • suggest the technical skills that may be used to solve the identified problem.	using skills in technical areas?

Core competencies to be developed:
- Digital literacy as learners watch video clips to identify the properties of various non-metallic materials
- Communication and collaboration as learners work in groups
- Critical thinking and problem solving as learners distinguish different non-metallic materials

Pertinent and Contemporary Issues (PCI's):
- Self-awareness as leaners interact with resource persons(s)
- Disaster risk reduction as learners study the characteristics of non-metallic materials and classify them into useful and non-useful materials

Values:
- Unity as learners work in groups
- Respect as learners acknowledge each other's contribution during group discussions

Links to other learning areas;
- Science and technology as learners group non-metallic materials as either natural and synthetic
- Computer science as learners use digital media to watch video clips on the physical properties of non-metallic materials

Assessment Rubric				
Indicator	**Exceeds Expectation**	**Meets Expectation**	**Approaches Expectation**	**Below Expectation**
Ability to distinguish between synthetic and natural non-metallic materials	Accurately distinguishes between synthetic and natural non-metallic materials	Correctly distinguishes between synthetic and natural non-metallic materials	Attempts to distinguish between synthetic and natural non-metallic materials	Has difficulties in distinguishing between synthetic and natural non-metallic materials
Ability to categorize the non-metallic materials as either synthetic or natural non-metallic materials	Categorizes all the non-metallic materials as either synthetic or natural non-metallic materials	Categorizes most of the non-metallic materials as either synthetic or natural non-metallic materials	Categorize some of the non-metallic materials as either synthetic or natural non-metallic materials	Needs support to categorize the non-metallic materials as either synthetic or natural non-metallic materials
Ability to describe physical properties of non-metallic materials in the locality	Describes all the physical properties of non-metallic materials in the locality	Describes most of the physical properties of	Describes some of the physical properties of non-metallic materials in the locality	Has difficulties in describing physical properties of

		non-metallic materials in the locality		non-metallic materials in the locality
Ability to identify the uses of non-metallic materials in the locality.	Identifies all the uses of non-metallic materials in the locality.	Identifies most of the uses of non-metallic materials in the locality.	Identifies some of the uses of non-metallic materials in the locality.	Needs support to identify the uses of non-metallic materials in the locality.

STRAND 3.0: TOOLS

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
3.0 Tools	**3.1 Household hand tools** (9 lessons)	By the end of the sub-strand, the learner should be able to: a) identify household hand tools in the locality b) categorize household hand tools according to their uses c) use household hand tools to perform given tasks correctly d) care and maintain household hand tools appropriately after use e) recognize the careers related to household hand tools f) appreciate the role of household tools in the community.	Learners are guided to: • use realia and visual aids to identify house hold hand tools used in the locality • watch video clips, and observe charts on house hold hand tools • draw and categorize household tools according to use • role-play safe use and storage of household hand tools • discuss the proper care, maintenance and safe storage of household hand tools • discuss careers related to household hand tools • collaborate with the teachers, parents and guardians to perform simple tasks using household hand tools	1. What are household hand tools? 2. Why are household tools important?
Core competencies to be developed: • Communication and collaboration as learners discuss the use of household hand in the locality • Critical thinking and problem solving as learners choose the tools to solve a problem in the community.				

- Digital literacy as learners use digital devices to categorize tools.
- Citizenship as learners display and discuss the items made to solve a problem in the community.

Pertinent and Contemporary Issues (PCI's):
- Environmental protection as learners use household tools to perform tasks correctly and also take care of and maintain them

Values:
- Responsibility as learners take care of tools in the locality
- Love as learners share items as they practice use of tools
- Respect as learners recognize the contribution of every member during group discussions.
- Integrity as learners care for hand tools in the locality

Links to other learning areas:
- Computer science -ICT applications as learners download and watch video clips on the uses of household hand tools
- Home science as learners clean and store household hand tools

Assessment Rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify household hand tools in the locality	Identifies all the household hand tools in the locality	Identifies most of the household hand tools in the locality	Identifies some of the household hand tools in the locality	Needs support to identify household hand tools in the locality
Ability to categorize household hand tools according to the uses	Categorizes all the household hand tools according to the uses	Categorizes most of the household hand tools according to the uses	Categorizes some of the household hand tools according to the uses	Has difficulties in categorizing household hand tools according to the uses

Ability to use household hand tools to perform given tasks correctly	Uses household hand tools to perform all given tasks correctly	Uses household hand tools to perform most of the given tasks correctly	Uses household hand tools to perform some of the given tasks correctly	Requires support to use household hand tools to perform given tasks correctly
Ability to take care of and maintain household hand tools appropriately after use	Cares and maintains all the household hand tools after use	Cares of and maintains most of the household hand tools appropriately after use	Cares for and maintains some of the household hand tools appropriately after use	Has difficulties in caring for and maintaining the household hand tools after use

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
3.0 Tools	3.2 Farming hand tools (10 lessons)	By the end of the sub-strand, the learners should be able to: a) identify farming hand tools in the locality b) categorize farming hand tools according to their uses c) use farming hand tools safely to perform given tasks d) care and maintain farming hand tools appropriately after use e) recognize the careers related to farming hand tools f) appreciate the importance of farming tools in the community	Learners are guided to: • use realia and visual aids to identify farming hand tools used in the locality • download and watch video clips and observe charts on farming hand tools • draw and categorize farming hand tools according to use • practise safe use of farming hand tools • discuss on the proper care, maintenance and safe storage of farming hand tools • observe and relate farming hand tools to careers • collaborate with teachers, parents and guardians to perform simple tasks using farming hand tools	Why are farming hand tools important?
	Project activity 2 (13 lessons)	By the end of the sub-strand, the learner should be able to:	Learners are guided to: • use visual aids to design items that may solve the problems identified in project activity 1.	What items are suitable for solving the problems

		a) suggest an item that may solve the problem identified in project activity 1 b) design the item that may solve the problem identified in project activity 1.		in your community?

Core competencies to be developed
- Communication and collaboration as learners discuss the use of farming tools in the locality
- Critical thinking and problem solving as learners choose the farming tools to solve a problem in the community.
- Digital literacy as learners use digital devices to categorize tools.
- Citizenship as learners display and discuss the items made to solve a problem in the community.
- Learning to learn as learners search and download video clips on farming hand tools

Pertinent and Contemporary Issues (PCI's):
- Environmental protection as learners use farming tools to perform good farming practices

Values:
- Responsibility as learners take care of tools in the locality
- Love as learners share items as they practice use of tools
- Respect as learners recognize the contribution of every member during group discussions.

Links to other learning areas
- Agriculture – as learners practice the care and maintenance of farming tools
- Computer science -ICT applications as learners watch video clips on categorizing of farming hand tools

Assessment Rubric				
Indicator	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to identify farming hand tools in the locality	Identifies all the farming hand tools in the locality	Identifies most of the farming hand tools in the locality	Identifies some of the farming hand tools in the locality	Needs guidance to identify farming hand tools in the locality
Ability to categorize farming hand tools according to the uses	Categorizes all farming hand tools according to the uses	Categorizes most of the farming hand tools according to the uses	Categorizes some of the farming hand tools according to the uses	Needs support to categorize farming hand tools according to the uses
Ability to use farming hand tools safely to perform given tasks	Uses all farming hand tools safely to perform given tasks	Uses most of the farming hand tools safely to perform given tasks	Uses some of the farming hand tools safely to perform given tasks	Has difficulties in using farming hand tools safely to perform given tasks
Ability to take care and maintain farming hand tools appropriately after use	Cares for and maintains all farming hand tools very well after use	Cares for and maintains most of the farming hand tools appropriately after use	Cares for and maintains some of the farming hand tools appropriately after use	Needs support to care for and maintain farming hand tools with difficulties after use

STRAND 4.0: DRAWING

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
4.0 **Drawing**	4.1 **Types of drawings** (5 lessons)	By the end of the sub strand, the learner should be able to: a) identify different types of drawings used in the technical fields b) distinguish between artistic and technical drawings c) describe the use of artistic and technical drawings in different fields d) recognize the application of drawings in various careers e) appreciate the importance of drawing in day to day life	Learners are guided to: • research and identify different types of drawings used in the technical fields • use digital images and charts, to distinguish between artistic or technical drawings • use downloaded video clips, to discuss the use of artistic and technical drawings • discuss careers related to use of drawings under the guidance of a resource person(s). • identify objects at home, school or in the community where drawing has been used to make them.	1. How are drawings used in various careers? 2. Why are drawings important in our day to day lives?
Core competencies to be developed:				
• Communication and collaboration as learners discuss careers related to the use of drawings • Citizenship as learners recognize the role of drawing in national economic development. • Digital literacy as the learners use video clips to describe the artistic and technical drawing • Critical thinking and problem solving as they relate the application of drawings to the built environment.				

Pertinent and Contemporary Issues (PCI's):
- Decision making as learners effectively use drawing instruments.
- Mental health as learners work in groups

Values:
- Respect as learners recognize the contribution of every member in group discussions

Links to other learning areas:
- Visual arts – as learners identify various drawings
- Computer science – as learners watch video clips to describe the use of artistic and technical drawing

Assessment Rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify various types of drawings	Identifies all various types of drawings	Identifies most of the various types of drawings	Identifies most of the various types of drawings	Requires support to identify various types of drawings
Ability to distinguish between artistic and technical drawings	Accurately distinguishes between artistic and technical drawings	Correctly distinguishes between artistic and technical drawings	Attempts to distinguish between artistic and technical drawings	Has difficulties in distinguishing between artistic and technical drawings
Ability to describe the uses of artistic and technical drawing as used in various fields.	Describes all the uses of artistic and technical drawing as used in various fields	Describes most of the uses of artistic and technical drawing as used in various fields	Describes some of the uses of artistic and technical drawing as used in various fields	Has difficulties in describing the uses of artistic and technical drawing as used in various fields

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
4.0 Drawing	**4.2 Drawing instruments and equipment** (5 lessons)	By the end of the sub strand, the learner should be able to: a) identify drawing instruments and equipment in technical drawing b) describe the use of drawing instruments and equipment in technical drawing c) draw lines and shapes using drawing instruments and equipment d) demonstrate proper care and maintenance of drawing instruments and equipment e) appreciate the use of drawing instruments and equipment in various careers	Learners are guided to: • identify, draw and name the various drawing instruments and equipment • use realia and video clips, to discuss the use of various drawing instruments and equipment • use drawing instruments, to draw given lines and shapes. • learn how to care for and maintain drawing instruments and equipment • watch video clips on the use of drawing instruments and equipment in various careers	1. How are drawing instruments and equipment used? 2. Why is it important to care for and maintain drawing instruments and equipment?

Core competencies to be developed:
- Communication and collaboration: as learners work in groups
- Learning to learn as learners use and maintain technical drawing instruments
- Digital literacy as the learners watch video clips

Pertinent and Contemporary Issues (PCI's):
- Decision making as learners effectively use drawings
- Mental health as learners work in groups and as individuals

Values:
- Responsibility: as learners take care of drawing instruments
- Integrity: as learners take care of the drawing instruments
- Respect: as learners recognize the contribution of every member in group discussions
- Patriotism: as learners recognize the use of lines and shapes as used in the national flag and traffic signs

Links to other learning areas:
- Visual arts: as learners draw shapes
- Agriculture: as learners draw farm tools and equipment
- Mathematics: as learners perform geometrical constructions
- Computer science: as learners watch video clips to discuss construction of shapes

Assessment Rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify instruments and equipment	Identifies all drawing instruments and equipment	Identifies most of the drawing instruments and equipment	Identifies some of the instruments and equipment	Needs support to identify drawing instruments and equipment
Ability to describe the uses of drawing instruments and equipment	Describes all the uses of drawing instruments and equipment	Describes most of the uses of drawing instruments and equipment	Describes some of the uses of drawing instruments and equipment	Has difficulties in describing the use of drawing instruments and equipment

Ability to draw lines and shapes using drawing instruments and equipment	Draws all lines and shapes using drawing instruments and equipment	Draws most of the lines and shapes using drawing instruments and equipment	Draws some of the lines and shapes using drawing instruments and equipment	Needs support to draw lines and shapes using drawing instruments and equipment
Ability to care for and maintain drawing instruments and equipment	Cares for and maintains all drawing instruments and equipment	Cares for and maintains most of the drawing instruments and equipment	Cares for and maintains some of the drawing instruments and equipment	Has difficulties in caring for and maintaining drawing instruments and equipment

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
4.0 Drawing	**4.3 Free hand sketching** (10 lessons)	By the end of the sub strand, the learner should be able to: a) sketch lines using free hand b) sketch two dimensional shapes using free hand c) sketch still life objects in perspective drawing d) recognize the use of free hand sketches in expression of artistic ideas in different career fields. e) appreciate the importance of free hand sketching in day to day life	Learners are guided to: • use pencils and drawing papers to sketch lines • use pencils and drawing papers to sketch two-dimensional shapes • use realia, to sketch still life objects • use digital media, to observe how free hand sketches express artistic ideas in different career fields • take photos of the sketches and drawings for the development of portfolios	Why is free hand sketching important?

Core competencies to be developed:
- Communication and collaboration as learners discuss in groups
- Learning to learn as learners use free hand sketches to communicate
- Digital literacy as the learners take photographs using digital devices
- Critical thinking and problem solving as learners discuss and make free hand sketches

Pertinent and Contemporary Issues (PCI's):
- Decision making as learners effectively use drawing instruments
- Mental health as learners work in groups and as individuals

Values:
- Responsibility as learners take care of drawing instruments
- Respect as learners recognize the contribution of every member in group discussions
- Patriotism as learners recognize the use of lines and shapes as used in the national flag and traffic signs

Links to other learning areas:
- Visual arts – as learners draw objects using free hand sketches

Assessment Rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to sketch lines using free hand	Sketches all the lines using free hand	Sketch most of the lines using free hand	Sketch some of the lines using free hand	Needs support to sketch lines using free hand
Ability to sketch two dimensional shapes using free hand	Sketches all two-dimensional shapes using free hand	Sketches most of the two-dimensional shapes using free hand	Sketches some of the two-dimensional shapes using free hand	Has difficulties in sketching two dimensional shapes using free hand
Ability to sketch still life objects in perspective drawing	Sketches all still life objects in perspective drawing	Sketches most of the still life objects in perspective drawing	Sketches some of the still life objects in perspective drawing	Requires support to sketch still life objects in perspective drawing

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
4.0 Drawing	**4.4 Geometrical construction** (10 lessons)	By the end of the sub strand, the learner should be able to: a) construct different angles in plane geometry b) construct different types of quadrilaterals in plane geometry c) construct different types of circles in plane geometry d) construct combined shapes in plane geometry e) identify different career fields where the knowledge of geometrical construction could be applied in the locality f) appreciate the importance of geometrical construction in everyday life.	Learners are guided to: • use video clips and visual aids to discuss how to construct different geometrical shapes • practice construction of different angles and triangles in plane geometry • practice construction of quadrilaterals in plane geometry • practice construction of circles in plane geometry • practice construction of combined shapes • apply geometry in different career fields • construct objects found at school, at home and in the community using geometric construction	1. How are geometric construction drawings done? 2. Where can geometrical construction be applied?

	Project activity 3 (10 Lessons)	By the end of the sub-strand, the learner should be able to: a) suggest the materials for making the item designed in project activity 2 b) gather the materials for making the item designed in project activity 2 c) store the prepared materials for making the item designed in project activity 2	Learners are guided to: • use visual aids to observe and pick out the materials used to make the item designed in project activity 2. • find and collect the materials chosen. • keep the collected materials safely	Which materials are suitable for making items to solve the problems in your community?

Core competencies to be developed:
- Communication and collaboration: as learners discuss in groups
- Digital literacy as learners use video clips
- Critical thinking and problem solving as learners relate the application of plane geometry to different careers

Pertinent and Contemporary Issues (PCI's):
- Decision making as learners effectively use drawing instruments
- Mental health as learners work as groups and as individuals

Values:
- Responsibility as learners take care of drawing instruments
- Respect as learners recognize the contribution of every member in group discussions
- Patriotism as learners recognize the use of lines and shapes as used in the national flag and traffic signs

Links to other learning areas:
- Visual Arts: as learners draw plane figures
- Agriculture: as learners draw farm tools and equipment
- Mathematics: as learners perform geometrical construction

Assessment Rubric				
Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to construct angles in plane geometry	Constructs all angles in plane geometry	Constructs most of the angles in plane geometry	Constructs some of the angles in plane geometry	Requires support to construct angles in plane geometry
Ability to construct triangles and quadrilaterals in plane geometry	Constructs all triangles and quadrilaterals in plane geometry	Constructs most of the triangles and quadrilaterals in plane geometry	Constructs some of the triangles and quadrilaterals in plane geometry	Needs support to construct triangles and quadrilaterals in plane geometry
Ability to construct circles in plane geometry	Constructs circles in plane geometry accurately	Constructs circles in plane geometry	Attempts to construct circles in plane geometry	Needs guidance to construct circles in plane geometry
Ability to construct combined shapes in plane geometry	Constructs all combined shapes in plane geometry	Constructs most combined shapes in plane geometry	Construct some combined shapes in plane geometry	Requires support to construct combined shapes in plane geometry
Ability to identify different career fields where the knowledge of geometrical construction could be applied	Identifies all different career fields where the knowledge of geometrical construction could be applied	Identifies most of the different career fields where the knowledge of geometrical construction could be applied	Identifies some of the different career fields where the knowledge of geometrical construction could be applied	Has difficulties identifying different career fields where the knowledge of geometrical construction could be applied

STRAND 5.0: ENERGY RESOURCES

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
5.0 Energy Resources	**5.1 Sources of energy** (5 lessons)	By the end of the sub-strand, the learner should be able to: a) identify the sources of energy within the locality b) classify the sources of energy in the locality as either renewable or non-renewable c) discuss the advantages and disadvantages of different sources of energy in the locality d) identify different careers which are related to energy in the locality e) appreciate the importance of energy in our lives	Learners are guided to: • discuss the concept of energy • identify the different sources of energy within the locality • use digital media, to explore other sources of energy • use flash cards to group various sources of energies as renewable and non-renewable • discuss the advantages and disadvantages of the different sources of energy • use digital devices to research on the skills required for particular energy related careers • tour the locality to observe and record the various careers related to energy • discuss how important energy is to our everyday life	1. What is energy? 2. Where does energy come from? 3. Why is energy important to our daily lives?

Core competencies to be developed:
- Communication and collaboration as learners identify the sources of energy in the locality
- Critical thinking and problem solving as learners discuss about the concept of energy
- Creativity and imagination as learners think about the advantages and disadvantages of different sources of energy
- Digital literacy as learners discuss on the skills required for particular energy related careers
- Self-efficacy as learners express themselves during group discussions
- Learning to learn as they research on energy

Pertinent and Contemporary Issues (PCIs):
- Environmental awareness as learners identify the different sources of energy in the locality
- Disaster risk reduction as learners identify the safe sources of energy for their own safety, safety of others and safety of the environment

Values:
- Responsibility as learners listen to each other and as they discuss sources of energy in the locality
- Patriotism as learners take care of the environment by appreciating the sources of energy within the environment.
- Unity as learners carry out learning activities together.
- Respect as learners recognize each other's contribution during group activities.

Links to other learning areas:
- Computer science (ICT application) as learners search for information in the internet and watch video clips.
- Integrated science as learners discuss the different sources of energy.
- Life skills as learners tour the locality to observe and record various careers related to energy

Assessment Rubric				
Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify the sources of energy within the locality	Identifies all the sources of energy within the locality	Identifies most of the sources of energy within the locality	Identifies some of the sources of energy within the locality	Needs support to identify the sources of energy within the locality
Ability to classify the sources of energy as renewable or non-renewable	Classifies all the sources of energy as renewable or non-renewable	Classifies most of the sources of energy as renewable or non -renewable	Classifies some of the sources of energy as renewable or non-renewable	Requires guidance to classify the sources of energy as renewable or non-renewable
Ability to discuss the advantages and disadvantages of different sources of energy	Discusses all the advantages and disadvantages of different sources of energy	Discusses most of the advantages and disadvantages of different sources of energy	Discusses some of the advantages and disadvantages of different sources of energy	Needs support to discuss the advantages and disadvantages of different sources of energy
Ability to identify different energy related careers	Identifies all different energy related careers	Identifies most of the different energy related careers	Identifies some of the different energy related careers	Requires support to identify different energy related careers

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
5.0 Energy Resources	**5.2 Uses of energy** (5 lessons)	By the end of the sub-strand, the learner should be able to; a) identify the different forms of energy in the locality b) classify the different forms of energy into either kinetic or potential energy c) identify the uses of different forms of energy in the locality d) recognize the different types of careers which require the use of energy within the locality e) appreciate the role of energy in the day to day life	Learners are guided to: • use digital media to identify the different forms of energy • use a chart to classify the different forms of energy as either kinetic or potential • discuss the uses of energy within the locality • use digital devices to explore different uses of energy. • walk around the locality to observe and record the different energy uses. • visit the locality to observe and record the various careers related to uses of energy within the locality.	1. How does energy affect our daily lives? 2. What ways can energy be useful to our lives?

| | **Project activity 4** (10 lessons) | By the end of the sub-strand, the learner should be able to;
 a) identify the safety precautions to observe when working with tools to make the item designed in project activity 2.
 b) use appropriate tools to prepare the materials collected in project activity 3.
 c) use appropriate tools to make the item designed in project activity 2.
 d) display the item made for others to see and appreciate. | Learners are guided to:
 • discuss the safety precautions to observe when working with tools to make the item designed in project activity 2
 • select and use appropriate tools to prepare the materials collected in project activity 3.
 • select and use appropriate tools to make the item designed in project activity 2.
 • display the item made for others to see and appreciate. | |

Core competencies to be developed:
- Communication and collaboration: as learners discuss in groups
- Critical thinking and problem solving: as learners think about how to solve problems in the community using energy.
- Creativity and imagination: as learners think about the various uses on energy within the localities.
- Digital literacy: as learners watch video clips and search for information online
- Self-efficacy: as learners express themselves during group discussions
- Citizenship: as learners think of how to solve problems in the community.

| **Pertinent and Contemporary Issues (PCIs):** |
| Self-awareness: as learners discuss the use of energies within the locality |

| **Values:** |
| • Responsibility: as learners listen to each other as they discuss the catalogues on the types of energies. |
| • Patriotism: as learners take care of the environment by suggesting use of energy within the environments. |
| • Unity: as learners carry out learning activities together. |
| • Respect: as learners recognize each other's contribution during group activities. |

| **Links to other Learning areas:** |
| • Computer science: ICT application as learners search for information in the internet and watch video clips. |
| • Integrated science: as learners discuss the different forms of energies. |
| • Life skills : as learners discuss practical uses of energy within the localities |

Assessment Rubric

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify the different forms of energy in the environment	Identifies all the different forms of energy in the environment	Identifies most of the different forms of energy in the environment	Identifies some of the different forms of energy in the environment	Needs guidance to identify the different forms of energy in the environment
Ability to classify the different forms of energy as either kinetic or potential	Classifies all the different forms of energy as either kinetic or potential	Classifies most of the different forms of energy as either kinetic or potential	Classifies some of the different forms of energy as either kinetic or potential	Has difficulties in classifying the different forms of energy as either kinetic or potential

Ability to identify the uses of different forms of energy in the locality	Identifies all the uses of different forms of energy in the locality	Identifies most of the uses of different forms of energy in the locality	Identifies some of the uses of different forms of energy in the locality	Requires support to identify the uses of different forms of energy in the locality

COMMUNITY SERVICE LEARNING (CSL) PROJECT

Project Title: Combined Rake and Broom
The CSL project is based on all the three strands in Grade 7 namely; Materials, Tools and Drawing. The project seeks to deepen the learners' understanding of the three strands by providing an opportunity to practice the knowledge and skills gained in the classroom to benefit their families and the community.

The teacher is expected to guide and facilitate the learners to plan, organize and implement the project activities. The project should be conducted by learners in groups.

Resources
The learners should make use of safe, locally available, sustainable and natural materials to make a combined rake and broom.

Integration of Learning and Community Service
Wood or waste plastic or metal are locally available materials and learners from all parts of Kenya can access them easily. They do not have to be bought. Wood is available from trees while pipes can be obtained from waste plastic or metal which are readily available**.** Learners will address the need for a homemade combined rake and broom for household use. This will ensure cleanliness at school, at home and in the community and a clean and healthy environment. Advocates of environmental conservation advise the general public to ensure a clean and safe environment by collecting garbage and storing it in a safe pit or dustbin both at home and in school. The use of a combined rake and broom can have a huge impact of ensuring a clean and safe environment for healthy living.

Making a combined rake and broom using locally available materials is an effective and cost effective way to keep the environment clean and safe for both learners and community members.

Strands Relating to CSL	Sub Strand	Project Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question (s)
6.0 • **MATERIALS** • **TOOLS** • **DRAWING**	**6.1 Making a Combined Rake and Broom** **(5 lessons)**	By the end of the CSL Project, the learner should be able to: a) identify a cost effective and sustainable method to make a combined rake and broom for household use b) generate a clear procedure of making a combined rake and broom c) apply the knowledge and skills acquired in materials, tools and drawing strands to make a combined rake and broom d) use a combined rake and broom to clean the environment e) evaluate the effectiveness of the project at school and in the community f) appreciate the use of locally available resources to make a combined rake and broom	The learner is guided to: • use digital and internet resources to search for locally available and sustainable materials for making homemade combined rake and broom *(use a piece of wood or a plastic or metal pipe, nails, sisal fiber, metal bar, glue)* • discuss and write a step by step procedure of making homemade rake and broom, • assemble the required materials and make the rake and broom • use the rake to collect garbage in the school compound and broom to clean your classroom (*let the peers assess the effectiveness of the rake*	1. What materials in your locality can be used in making a combined rake and broom? 2. What safety precautions will you take as you make a combined rake and broom?

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and broom and make comments)

- Sensitize the rest of the school and the members of the local community on the importance of a rake and broom
- evaluate the project by collecting feedback from the school community on whether the project is effective and any challenges experienced by use of the rake and broom.
- Share with the classmates on the achievements and challenges experienced during the project.

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The Key Component of CSL Developed: Life skills, Research, Entrepreneurship & Financial Literacy, Communication and Community Development.

Life Skill: Importance of Life Skills in the Community /School.

a) The learner will make a list of materials needed to make a combined rake and broom and collect them together

b) The learner will learn to work with others to achieve the objective of making a combined rake and broom

Entrepreneurship and Financial Literacy: Importance of Entrepreneurship and Financial Literacy in the Community and School.

a) The learner will make a combined rake and broom as an effort to guarantee a clean and habitable environment

b) The learner will show the benefits of using locally available materials to make a combined rake and broom as an income-generating venture.

Research: Importance of Research

a) The learner will carry out research using digital devices and internet to acquire knowledge and skills to make a combined rake and broom

b) The learner will acquire entrepreneurial skills which can be used to make an important gadget like a combined rake and broom in a cost effective and sustainable way

Community Development: Importance of Community Development

a) The learner will apply the knowledge and skills in making a combined rake and broom to support the community in keeping a clean and safe environment

b) The learner will sensitize the community on the need to protect the environment

Communication: Importance of Communication

a) The learner shall use various communication channels to enlighten the local community on the need to conserve the environment by living in clean homes and compounds and disposing waste in the most sustainable manner

Core Competencies to be Developed

- **Digital literacy:** as the learner uses digital devices and internet to research on the cheapest and sustainable method to make a combined rake and broom
- **Imagination and Creativity:** as the learner thinks through the project and designs a cost effective and sustainable method of making a combined rake and broom which will help the community to keep the environment clean
- **Critical thinking and Problem Solving:** as the learner generates logical procedure and steps to be used to make a combined rake and broom
- **Learning to learn:** as the learner uses the knowledge and skills acquired in class, carries out research to acquire more skills in making useful and sustainable gadgets like the combined rake and broom

Values

- Patriotism when the learner works with classmates and the local community to make a combined rake and broom to clean the environment

- Respect when the learner works with others to discuss and come up with ideas on how to make a combined rake and broom
- Love when the learner works in harmony with others to ensure the success of the project

Pertinent and Contemporary Issues (PCIs):
- Problem-solving skills when the learner makes a combined broom and rake to solve the need for keeping the environment clean
- Safety and security when learner makes devices that help to conserve and protect the environment and to sustainably dispose of waste for healthy living
- Poverty reduction when the learner converts the project into an income generating venture

Link to other Subjects:
- Mathematics when the learner takes measurements to cut and connect materials to make the combined broom and rake
- English language skills when learner works with others and discuss to come up with materials and steps for making the rake and broom
- Integrated Science when the learner uses science skills to make functional gadgets such as a rake to keep the environment clean

Assessment Rubric

Indicator	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Ability to identify a cost effective and sustainable method to make a rake and broom for household use	Creatively identifies a cost effective and sustainable method to make a rake and broom for household use	Correctly manages to identify a cost effective and sustainable method to make a rake and	Attempts to identify a cost effective and sustainable method to make a rake and broom for household	Identifies a cost effective and sustainable method to make a rake and broom for household use with support

		broom for household use	use with some challenges	
Ability to generate a clear procedure of making a rake and broom	Accurately generates a clear procedure of making a rake and broom	Manages to generate a clear procedure of making a rake and broom	Makes some effort to generate a clear procedure of making a rake and broom with some inaccuracies	Needs assistance to generate a clear procedure of making a rake and broom
Ability to apply the knowledge and skills acquired in materials, tools and drawing strands to make a rake and broom	Creatively applies the knowledge and skills acquired in materials, tools and drawing strands to make a rake and broom	Correctly applies the knowledge and skills acquired in materials, tools and drawing strands to make a rake and broom	Makes some effort to apply the knowledge and skills acquired in materials, tools and drawing strands to make a rake and broom	Applies the knowledge and skills acquired in materials, tools and drawing strands to make a rake and broom when assisted
Ability to use a rake and broom to clean the environment	Accurately uses a rake and broom to clean the environment	Correctly uses a rake and broom to clean the environment	Attempts to use a rake and broom to clean the environment	Can use a rake and broom to clean the environment when assisted.
Ability to evaluate the effectiveness of the project at school and in the community	Creatively evaluates the effectiveness of the project at school and in the community	Manages to evaluate the effectiveness of the project at school and in the community	Makes some effort to evaluate the effectiveness of the project at school and in the community	Needs support to evaluate the effectiveness of the project at school and in the community

APPENDIX: SUGGESTED LEARNING RESOURCES, ASSESSMENT METHODS AND NON-FORMAL ACTIVITIES

NO	STRAND	SUB STRAND	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT METHODS	SUGGESTED NON-FORMAL ACTIVITIES
1.	**SAFETY**	Personal Safety	- Workshop - Hand tools such as; chisels, hammers, screw drivers, jack planes, mallets, chisels, knives, needles, among others - Workshop attires such as; overcoats, aprons, shoes, googles among others - Career brochures, career magazines - Digital devices such as; computer, laptop, smart phone, tablets among others - Workshop rules and regulations	- Question and Answer - Observation - Checklist - Written test - Rubrics - Project - Practical work	- Learners visit a nearby workshop in the locality to observe how workers practice safety as they perform tasks - Learners generate a catalogue on the workshop rules and regulations on personal safety and safety of others

		Injuries	- First aid kit - Career brochures, career magazines - Digital devices such as; computer, laptop, smart phone, tablets among others - Workshop rules and regulations	- Question and Answer - Observation - Checklist - Written test - Rubrics - Project - Practical work	- Learners role play on how to administer first aid to other learners in the school - Learners organize public debates on career choices
2.	**MATERIALS**	Common Materials	- Stones, clay, sand, timber, sisal, ballast, grass, water, trees, minerals among others - Career brochures, career magazines - Digital devices such as; computer, laptop, smart phone, tablets among others	- Question and Answer - Observation - Checklist - Written test - Rubrics - Project - Practical work	Learners go round the compound and the nearby community and collect available materials and write down how each is used by the local community
		Metals	- Metals - Non-metals - Career brochures, career magazines	- Question and Answer - Observation - Checklist - Written test	Learners visit a nearby workshop to observe and record how metals

			• Digital devices such as; computer, laptop, smart phone, tablets among others	• Rubrics • Project • Practical work	are used to make different gadgets
		Non-metallic materials	• Non-metals • Synthetic materials • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Question and Answer • Observation • Checklist • Written test • Rubrics • Project • Practical work	• Learners visit a nearby workshop to observe and record how non-metals and synthetic materials are used to make different gadgets
3.	**TOOLS**	Household hand tools	• Jembes, rakes, spades, scissors, pangas, screw drivers, knives, cutters, pliers among others • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Question and Answer • Observation • Checklist • Written test • Rubrics • Project • Practical work	• Learners visit a nearby homes to observe and record how household hand tools are used in the family and local community
		Farming hand tools	• Jembes, plough, rakes, spades, scissors,	• Question and Answer	• Learners visit a nearby homes to

			pangas, screw drivers, knives, cutters, pliers among others	• Observation • Checklist • Written test • Rubrics • Project • Practical work	observe and record how farming hand tools are used in the family and
			• Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others		local community
4.	**DRAWING**	Types of Drawing	• Drawing charts • Drawing papers/books • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Question and Answer • Observation • Checklist • Written test • Rubrics • Project • Practical work	• Learners visit a nearby workshop to observe and record how different types of drawings are done and how they are used in the family and local community
		Drawing Instruments and Equipment	• Drawing tables • Drawing papers/books • Pencils • T-squares • Drawing instruments • Ruler/Straight edge • Set squares	• Question and Answer • Observation • Checklist • Written test • Rubrics • Project	• Learners visit a nearby workshop of a TVET institution to observe and record how drawing

			• Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Practical work	instruments and equipment are done and how they are used in the family and local community
		Free Hand Sketching	• Drawing tables • Drawing papers/books • Pencils • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others • Samples of free hand sketches • Two dimensional shapes	• Question and Answer • Observation • Checklist • Written test • Rubrics • Project • Practical work	• Learners visit a nearby fine art or cultural center to observe and record how free hand sketches are done and how they are used in the family and local community
		Geometrical Construction	• Drawing tables • Drawing papers/books • Pencils • T-squares • Drawing instruments	• Question and Answer • Observation • Checklist • Written test • Rubrics	• Learners visit a nearby workshop or a TVET institution to observe and record how

			• Ruler/Straight edge • Set squares • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Project • Practical work	geometrical construction is done and how it is used in the family and local community
5.	**ENERGY RESOURCES**	Sources of Energy	• Wind, Solar energy, Electric energy (DC/AC), Gas, Firewood, Coal among others (whichever is available in the locality) • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Question and Answer • Observation • Checklist • Written test • Rubrics • Project • Practical work	• Learners visit a nearby source of energy to observe and record how energy is generated and it is used in the family, business establishments and local community
		Uses of Energy	• Industry, workshop, salon or any other business organization among others	• Question and Answer • Observation • Checklist • Written test	• Learners visit a nearby industry, business centers or any other manufacturing

			(whichever is available in the locality) • Career brochures, career magazines • Digital devices such as; computer, laptop, smart phone, tablets among others	• Rubrics • Project • Practical work	organization to observe and record how energy is used to generate products for use by the family, business establishments and local community

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