REPUBLIC OF KENYA

MINISTRY OF EDUCATION

JUNIOR SECONDARY SCHOOL CURRICULUM DESIGN

PRE - TECHNICAL STUDIES
GRADE 7

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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FOREWORD

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

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

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

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

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PREFACE

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

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

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

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

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ACKNOWLEDGEMENT

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

KICD receives its funding from the Government of Kenya to enable the successful achievement of the stipulated mandate and implementation of the Government and Sector (Ministry of Education (MoE) plans. The Institute also receives support from development partners targeting specific programmes. The Grade 7 curriculum designs have been developed with the support of the World Bank through the Kenya Secondary Education Quality Improvement Program (SEQIP) commissioned by the MoE. Therefore, the Institute is very grateful for the support of the Government of Kenya, through the MoE and the development partners for the policy, resource and logistical support. Specifically, special thanks to the Cabinet Secretary – MoE and the Principal Secretary – State Department of Early Learning and Basic Education.

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

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

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LESSON ALLOCATION

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

NATIONAL GOALS OF EDUCATION.

Education in Kenya should:

i) Foster nationalism and patriotism and promote national unity.

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

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

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

a) Social Needs

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

b) Economic Needs

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

c) Technological and Industrial Needs

Education in Kenya should provide learners with the necessary skills and attitudes for industrial development. Kenya recognises 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. Practice 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 studies is a subject that prepares the learner for the Technical & Engineering (TE) and Career & Technology Studies (CTS), which are tracks in the Science, Technology, Engineering and Mathematics (STEM) pathway at senior secondary school (SSS). 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 secondary school.

The Pre-Technical 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 Secondary school. In making this choice, the learner's interests, abilities and personality will be considered.

LEARNING OUTCOMES FOR PRE - TECHNICAL 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 Questions
1.0 Safety	**1.1 Personal safety** **(4 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) recognise careers related to safety, f) appreciate the role of safety in day-to-day life.	The learner is 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,	1. Why is safety important? 2. How do you ensure safety when performing a task?

			• 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.	

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 recognise the input of every member during discussions.
- Unity as learners work together as a team.
- Responsibility as learners take care of tools and equipment.

Link to other learning areas:

- Health Education as learners safely handle and dispose waste materials in the community.

Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to identify potential hazards in relation to personal safety in day to day life.	Identifies and cites examples of potential hazards in relation to personal safety in day-to-day life.	Identifies potential hazards in relation to personal safety in day-to-day life.	Identifies some potential hazards in relation to personal safety in day-to-day life.	With guidance can identify potential hazards in relation to personal safety in day-to-day life.
Ability to demonstrate safety while performing given tasks.	Consistently demonstrates safety while performing given tasks.	Demonstrates safety while performing given tasks.	Sometimes demonstrates safety while performing given tasks.	Demonstrates safety while performing given tasks with assistance.
Ability to handle tools safely while performing tasks in the locality.	Skilfully handles tools safely while performing tasks in the locality.	Handles tools safely while performing tasks in the locality.	Handles some tools safely while performing tasks in the locality.	Requires support in handling tools safely while performing tasks in the locality.
Ability to determine the general safety rules and regulations for a given task.	Comprehensively determines the general safety rules and regulations for a given task.	Determines the general safety rules and regulations for a given task.	Determines some general safety rules and regulations for a given task.	Requires assistance to determine the general safety rules and regulations for a given task.

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) explain 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) recognise 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.	The learner is 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 recognise the input of every member in the group.
- Integrity as learners collect, use, care for, and safely store items and equipment.

Link 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.

Suggested Assessment Rubric

Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
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.	Identifies a few types of injuries that may occur at the locality.	With assistance to identifies types of injuries that may occur at the locality.

Ability to explain causes of injuries that may occur at the locality.	Explains all causes of injuries that may occur at the locality.	Explains most causes of injuries that may occur at the locality.	Explains a few causes of injuries that may occur at the locality.	Requires support to explain causes of injuries that may occur at the locality.
Ability to relate the types of injury and the corresponding first aid requirements.	Relates all the types of injury and the corresponding first aid requirements.	Relates most types of injury and the corresponding first aid requirements.	Relates a few 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.	Consistently 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.	With guidance to apply safety measures to minimize injuries in the locality.

STRAND 2.0: MATERIALS

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
2.0 Materials	**2.1 Common materials** **(7 Lessons)**	By the end of the sub strand, the learner should be able to; a) identify the common materials found in the locality, b) categorise 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) recognise careers related to materials in the locality, f) embrace the importance of different materials found in the locality.	The learner is 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 (PCIs):

- 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.

Link to other learning areas:

- Integrated Science as leaners investigate the physical properties of materials.

Suggested Assessment Rubric

Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
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 a few of the common materials found in the locality.	Requires support to identify the common materials found in the locality.

Ability to categorise the common materials in the locality into metals and non-metals.	Categorises all the common materials in the locality into metals and non-metals.	Categorises most of the common materials in the locality into metals and non-metals.	Categorises a few of the common materials in the locality into metals and non-metals.	Needs support to categorise the common materials in the locality into metals and non-metals.
Ability to distinguish metallic and non-metallic materials in the locality.	Distinguishes all metallic and non-metallic materials in the locality.	Distinguishes most of the metallic and non-metallic materials in the locality.	Distinguish a few of the metallic and non-metallic materials in the locality.	With prompts distinguishes metallic and non-metallic materials in the locality.
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 a few 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.
Recognise careers related to materials in the locality.	With ease recognises careers related to materials in the locality.	Recognise careers related to materials in the locality.	Recognises some careers related to materials in the locality.	With prompts recognises careers related to materials in the locality.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
2.0 Materials	**2.2 Metals** **(8 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) explain the uses of metals in the locality, d) recognise careers related to use of metals, e) appreciate the importance of metals in the locality.	The learner is guided to; • develop a checklist for identifying different types of metals (steel, aluminium, copper, amongst others) • 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 (steel, aluminium, copper, amongst others) • 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 (PCIs):

- 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.

Link 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.

Suggested Assessment Rubric

Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
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 a few of the different types of metals found in the locality.	Has difficulties in identifying different types of metals found in the locality.

Ability to describe 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 a few 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 explain the uses of metals found in the locality.	Explains all the uses of metals found in the locality.	Explain most of the uses of metals found in the locality.	Explains a few of the uses of metals found in the locality.	With prompts explain the uses of metals found in the locality.
Recognise careers related to use of metals.	With ease recognises careers related to use of metals.	Recognise careers related to use of metals.	Recognise some careers related to use of metals.	Recognise careers related to use of metals with assistance.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
2.0 Materials	**2.3 Non-metallic materials** **(8 Lessons)**	By the end of the sub strand, the learner should be able to; a) distinguish between synthetic and natural non-metallic materials, b) categorise 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) recognise careers related to the processing and use of non-metallic materials.	The learner is guided to; • research and develop a checklist for classifying non-metallic materials (wood, paper, plastics, rubber, cement, glass, ceramics, minerals among others), • 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 (10 **Lessons)**	By the end of the sub strand, the learner should be able to; a) identify a problem in their community which requires a solution using skills in the technical fields, b) describe how the problem affects the community,	The learner is guided to: • point out and discuss the existing problems in their community that require a solution using skills in the technical fields,	What are the problems in your society that can be solved using skills in technical areas?

		c) identify skills needed to solve the problems in the community.	• 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.	

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 (PCIs):

- 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.

Link to other learning areas:

- Science and technology as learners group non-metallic materials as either natural or synthetic.
- Computer science as learners use digital media to watch video clips on the physical properties of non-metallic materials.

Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to distinguish between synthetic and natural non-metallic materials.	Comprehensively distinguishes between synthetic and natural non-metallic materials.	Distinguishes between synthetic and natural non-metallic materials.	Leaves out some details when distinguishing between synthetic and natural non-metallic materials.	With prompts distinguishes between synthetic and natural non-metallic materials.
Ability to categorise the non-metallic materials as either synthetic or natural non-metallic materials.	Categorises all the non-metallic materials as either synthetic or natural non-metallic materials.	Categorises most of the non-metallic materials as either synthetic or natural non-metallic materials.	Categorise a few of the non-metallic materials as either synthetic or natural non-metallic materials.	Needs support to categorise 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 non-metallic materials in the locality.	Describes a few of the physical properties of non-metallic materials in the locality.	Describes the physical properties of non-metallic materials in the locality with assistance
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 a few of the uses of non-metallic materials in the locality.	Needs guidance 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** (7 **Lessons)**	By the end of the sub strand, the learner should be able to; a) Identify household hand tools in the locality, b) categorise 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) recognise the careers related to household hand tools, f) appreciate the role of household tools in the community.	The learner is 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 categorise 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 categorise tools.
- Citizenship as learners display and discuss the items made to solve a problem in the community.

Pertinent and Contemporary Issues (PCIs):

- 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 recognise the contribution of every member during group discussions.
- Integrity as learners care for hand tools in the locality.

Link 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.

Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
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 categorise household hand tools according to the uses.	Categorises all the household hand tools according to the uses.	Categorises most of the household hand tools according to the uses.	Categorises some of the household hand tools according to the uses.	Has difficulties in categorising 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 care and maintain household hand tools appropriately after use.	Cares for and maintains all the household hand tools after use.	Cares for 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.
Recognise the careers related to household hand tools.	Easily recognises the careers related to household hand tools.	Recognises the careers related to household hand tools.	Recognises some careers related to household hand tools.	Recognises the careers related to household hand tools with assistance.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
3.0 Tools	**3.2 Farming hand tools** (7 **Lessons**)	By the end of the sub strand, the learner should be able to; a) identify farming hand tools in the locality, b) categorise 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) recognise the careers related to farming hand tools, f) appreciate the importance of farming tools in the community.	The learner is 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 categorise 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 **(10 Lessons)**	By the end of the sub strand, the learner should be able to; 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, c) prepare a cost estimate for designed item.	The learner is 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 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 categorise 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 (PCIs): • 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 recognise the contribution of every member during group discussions.				
Link 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 categorising of farming hand tools.				

Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
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 a few of the farming hand tools in the locality.	Needs guidance to identify farming hand tools in the locality.
Ability to categorise farming hand tools according to the uses.	Categorises all farming hand tools according to the uses.	Categorises most of the farming hand tools according to the uses.	Categorises a few of the farming hand tools according to the uses.	Needs support to categorise 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 a few of the farming hand tools safely to perform given tasks.	With prompts uses 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.
Recognise the careers related to farming hand tools.	Easily recognises the careers related to farming hand tools.	Recognises the careers related to farming hand tools.	Recognises some careers related to farming hand tools.	Recognise the careers related to farming hand tools with assistance.

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) recognise the application of drawings in various careers, e) appreciate the importance of drawing in day to day life.	The learner is 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 recognise 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 (PCIs):

- Decision-making as learners effectively use drawing instruments.
- Mental health as learners work in groups.

Value:

- Respect as learners recognise the contribution of every member in group discussions.

Link 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.

Suggested Assessment Rubric

Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to identify various types of drawings used in the technical fields.	Identifies all various types of drawings used in the technical fields.	Identifies most of the various types of drawings used in the technical fields.	Identifies a few of the various types of drawings used in the technical fields.	Needs assistance to identify various types of drawings used in the technical fields.

Ability to distinguish between artistic and technical drawings.	Comprehensively distinguishes between artistic and technical drawings.	Distinguishes between artistic and technical drawings.	Partially distinguishes between artistic and technical drawings.	With prompts distinguishes between artistic and technical drawings.
Ability to describe the uses of artistic and technical drawing as used in different fields.	Describes all the uses of artistic and technical drawing as used in different fields.	Describes most of the uses of artistic and technical drawing as used in different fields.	Describes a few of the uses of artistic and technical drawing as used in different fields.	Needs assistance to describe the uses of artistic and technical drawing as used in various fields.
Recognise the application of drawings in various careers.	Exhaustively recognises the application of drawings in various careers.	Recognises the application of drawings in various careers.	Recognises some application of drawings in various careers.	With assistance recognises the application of drawings in various careers.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
4.0 Drawing	**4.2 Drawing instruments and materials** **(4 Lessons)**	By the end of the sub strand, the learner should be able to; a) identify drawing instruments and materials in technical drawing, b) describe the use of drawing instruments and materials in technical drawing, c) draw lines and materials shapes using drawing instruments, d) demonstrate proper care and maintenance of drawing instruments and materials, e) appreciate the use of drawing instruments and materials in various careers.	The learner is guided to; • identify, draw and name the various drawing instruments (drawing paper, drawing book, compass, proctator, divider, ruler, pencil, squares, eraser, and sharper), • use realia and video clips, to discuss the use of various drawing instruments and materials, • use drawing instruments and materials, to draw given lines and shapes, • learn how to care for and maintain drawing instruments and materials, • watch video clips on the use of drawing instruments and materials in various careers.	1. How are drawing instruments and materials used? 2. Why is it important to care for and maintain drawing instruments and materials?

Core competencies to be developed: • Communication and collaboration as learners work in groups. • Learning to learn as learners use and maintain technical drawing instruments and materials. • Digital literacy as the learners watch video clips.
Pertinent and Contemporary Issues (PCIs): • 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 and materials. • Integrity as learners take care of the drawing instruments and materials. • Respect as learners recognise the contribution of every member in group discussions. • Patriotism as learners recognise the use of lines and shapes as used in the national flag and traffic signs.
Link 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.

Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to identify instruments and materials in technical drawing	Identifies all drawing instruments and materials in technical drawing.	Identifies most of the drawing instruments and materials in technical drawing.	Identifies a few of the instruments and materials in technical drawing.	Needs assistance to identify drawing instruments and materials in technical drawing.
Ability to describe the uses of drawing instruments and materials in technical drawing	Describes the uses of drawing instruments and materials in technical drawing with illustrations	Describes the uses of drawing instruments and materials in technical drawing.	Describes of the uses of drawing instruments and materials in technical drawing leaving out some details.	With prompts describes the use of drawing instruments and materials in technical drawing.
Ability to draw lines and shapes using drawing instruments and equipment.	Comprehensively draws lines and shapes using drawing instruments and materials.	Draws lines and shapes using drawing instruments and materials.	Partially draws lines and shapes using drawing instruments and materials.	Needs guidance to draw lines and shapes using drawing instruments and materials.
Ability to demonstrate proper care and maintenance of drawing instruments and materials.	Demonstrates proper care and maintenance of all drawing instruments and materials.	Demonstrates proper care and maintenance of most of the drawing instruments and materials.	Demonstrates proper care and maintenance of a few drawing instruments and materials.	Demonstrates proper care and maintenance of drawing instruments and materials with assistance.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
4.0 Drawing	**4.3 Free-hand sketching** **(8 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) recognise 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.	The learner is guided to; • use pencils and drawing papers to sketch lines, • use pencils and drawing papers to sketch two-dimensional shape, • 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 (PCIs): • 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 recognise the contribution of every member in group discussions. • Patriotism as learners recognise the use of lines and shapes as used in the national flag and traffic signs.
Link to other learning areas: • Visual arts as learners draw objects using free hand sketches.

Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to sketch lines using free-hand.	Sketches all the lines using free-hand.	Sketch most of the lines using free-hand.	Sketch a few lines using free-hand.	Needs support to sketch lines using free-hand.
Ability to sketch two dimensional shapes using free-hand.	Skillfully sketches Two-dimensional shapes using free-hand.	Sketches two-dimensional shapes using free-hand.	Sketches some of the two-dimensional shapes using free-hand.	With guidance sketches two dimensional shapes using free-hand.
Ability to sketch still life objects in perspective drawing.	Skillfully sketches still life objects in perspective drawing.	Sketches 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.
Recognise the use of free hand sketches in expression of artistic ideas in different career fields.	Easily recognises the use of free hand sketches in expression of artistic ideas in different career fields.	Recognise the use of free hand sketches in expression of artistic ideas in different career fields.	Recognises some uses free hand sketches in expression of artistic ideas in different career fields.	Recognise the use of free hand sketches in expression of artistic ideas in different career fields with assistance.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
4.0 Drawing	**4.4 Geometrical construction** **(8 Lessons)**	By the end of the sub strand, the learner should be able to; a) construct different types of angles in plane geometry, b) construct different types of quadrilaterals in plane geometry, c) construct combined shapes in plane geometry, d) identify different career fields where geometrical construction is applied, e) appreciate the importance of geometrical	The learner is 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 (square, rectangle, rhombus, parallelograms), • practice construction of combined shapes (inscribed and circumscribed), • discuss application of geometrical construction in different career fields under the guidance of a resource person, • construct objects found at school, at home and in the	1. How are geometric construction drawings done? 2. Where can geometrical construction be applied?

		construction in everyday life.	community using geometric construction.	
	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.	The learner is 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.	What 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 downloads and watch video clips. • Critical thinking and problem-solving as learners relate the application of plane geometry to different careers.				
Pertinent and Contemporary Issues (PCIs): • 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 recognise the contribution of every member in group discussions.
- Patriotism as learners recognise the use of lines and shapes as used in the national flag and traffic signs.

Link 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.

Suggested Assessment Rubric

Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to construct different types of angles in plane geometry.	Systematically constructs different types of angles in plane geometry.	Constructs different types of angles in plane geometry.	Constructs different types of angles in plane geometry leaving out a few steps.	Constructs different types of angles in plane geometry leaving out many steps.

Ability to construct triangles and quadrilaterals in plane geometry.	Systematically constructs triangles and quadrilaterals in plane geometry.	Constructs triangles and quadrilaterals in plane geometry.	Constructs triangles and quadrilaterals in plane geometry leaving out a few steps.	Constructs triangles and quadrilaterals in plane geometry leaving out many steps.
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) select an appropriate source of energy for use in day to day activities, d) identify different types of careers which are related to energy in the locality, e) appreciate the importance of energy in our lives.	The learner is 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, • brainstorm in groups the best source of energy for use in day to day activities, • use digital devices to research on the skills required for particular energy related careers.	1. What is energy? 2. Where does energy come from? 3. Why is energy important to our daily lives?

			• tour the locality to observe and record the various careers related to energy. • discuss how important energy is to our everyday life.	

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 recognise each other's contribution during group activities.

Link 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.

Suggested Assessment Rubric

Indicators	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
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 select an appropriate source of energy for use in day to day activities.	Consistently selects an appropriate source of energy for use in day to day activities.	Selects an appropriate source of energy for use in day to day activities.	Sometimes selects an appropriate source of energy for use in day to day activities.	Rarely selects an appropriate source of energy for use in day to day activities.
Ability to identify different types of careers which are related to energy in the locality.	Distinctively identifies different types of careers which are related to energy in the locality.	Identifies different types of careers which are related to energy in the locality.	Identifies some types of careers which are related to energy in the locality.	Identifies different types of careers which are related to energy in the locality with assistance.

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 as either kinetic or potential energy, c) identify the uses of different forms of energy in the locality, d) recognise 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.	The learner is 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 **(9 Lessons)**	By the end of the sub strand, the learner should be able to; a) identify the safety precautions to observe when working with	The learner is guided to; • discuss the safety precautions to observe when working with tools to make the item designed in project activity 2,	

		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.	• 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 of 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 recognise each other's contribution during group activities.

Link 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.

Suggested Assessment Rubric

Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
Ability to identify the different forms of energy in the locality.	Exhaustively identifies the different forms of energy in the locality.	Identifies different forms of energy in the locality.	Identifies some forms of energy in the locality.	Needs guidance to identify the different forms of energy in the locality.
Ability to classify the different forms of energy as either kinetic or potential energy.	Exhaustively classifies the different forms of energy as either kinetic or potential energy.	Classifies different forms of energy as either kinetic or potential energy.	Classifies some forms of energy as either kinetic or potential energy.	Needs assistance to classify the different forms of energy as either kinetic or potential energy.
Ability to identify the uses of different forms of energy in the locality.	Comprehensively identifies the uses of different forms of energy in the locality.	Identifies 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.
Recognise the different types of careers which require the use of energy within the locality.	Easily recognises the different types of careers which require the use of energy within the locality.	Recognise the different types of careers which require the use of energy within the locality.	Recognise some types of careers which require the use of energy within the locality.	Recognise the different types of careers which require the use of energy within the locality with prompts.

GUIDELINES ON COMMUNITY SERVICE LEARNING CLASS ACTIVITY.

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

All learners in Grade 7 are expected to participate in only one CSL class activity. The activity will give learners an opportunity to practice the CSL project skills covered under LSE. This activity will be undertaken in groups for purposes of learning. Learners will be expected to apply knowledge and skills on steps of the CSL project to carry out an activity of their choice as per the guidelines provided in the template. The learning approach will take the form of a whole school approach, where the entire school community will be engaged in the learning process. Teachers will guide learners to execute a simple school based integrated CSL class activity. This activity can be done in 4 to 6 weeks outside the classroom time.

CSL Skills to be covered:

i) **Research:** Learners will develop research skills as they investigate PCIs to address the activity, ways and tools to use in collecting the data, manner in which they will analyse information and present their findings.

ii) **Communication:** Learners will develop effective communication skills for as they engage with peers and school community members. These will include listening actively, asking questions, presentation skills using varied modes etc.

iii) **Citizenship:** Learner will be able to explore opportunities for engagement as members of the school community and providing a service for the common good.

iv) **Leadership**: Learners develop leadership skills as they take up various roles within the CSL activity.

v) **Financial Literacy Skills:** Learners consider how they can undertake the project as well as sourcing and utilising resources effectively and efficiently.

vi) **Entrepreneurship**: Learners consider ways of generating income through innovation for the CSL class activity.

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

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

Suggested Suggested Assessment Rubric				
Indicator	**Exceeds expectations**	**Meets expectations**	**Approaches expectations**	**Below expectations**
The ability to identify a problem in the school community through research	Systematically identifies a problem in the school community through research	Identifies a problem in the school community through research	Leaves out some steps in identifying a problem in the school community through research	Identifies a problem in the school community through research with guidance
The ability plan the solution to the identified problem in the community	Comprehensively plans the solution to the identified problem in the community	Plans the solution to the identified problem in the community	Plans the solution to the identified problem in the community leaving out a few details	Plans the solution to the identified problem in the community with assistance
The ability to design solutions to the identified problem	Creatively designs solutions to the identified problem	Design solutions to the identified problem	Leaves out some details when designing solutions to the identified problem	Design solutions to the identified problem with guidance
Ability to implement solution to the identified problem	Comprehensively implements solution to the identified problem	Implements solution to the identified problem	Implements solution to the identified problem leaving out a few steps	With assistance implements solution to the identified problem
The ability to share the findings with relevant actors.	Comprehensively shares the findings with relevant actors.	Shares the findings with relevant actors.	Shares findings with some relevant actors.	With prompts shares the findings with relevant actors.

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

S/No	Strand	Sub Strand	Suggested Resources	Suggested Assessment Methods	Suggested Non-Formal Activities
1.	**Safety**	Personal Safety	• Hand tools such as chisels, hammers, screw drivers, jack planes, mallets, chisels, knives, needles, among others. • Workplace attires such as overcoats, aprons, shoes, goggles 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 workplace 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. • Workplace 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. • 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 metals 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	• Scissors, razor blades, broom, brush, needle, screw drivers, mop, nail cutters, knives, pliers, axe among others. • Career brochures, career magazines.	• Question and Answer. • Observation. • Checklist. • Written test. • Rubrics. • Project.	• Learners visit a nearby homes to observe and record how household hand tools are used in the family

			• Digital devices such as computer, laptop, smart phone, tablets among others.	• Practical work.	and local community.
		Farming hand tools	• Jembes, plough, rakes, spades, pangas, screw drivers, grass 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 farming hand tools are used in the family and 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 materials	• Drawing materials. • Geometrical set. • 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 of a TVET institution to observe and record how drawing instruments and materials are done and how they are used in the family and local community.
		Free-Hand Sketching	• 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 papers/books. • Pencils. • Geometrical set. • Ruler/Straight edge. • Set squares. • 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 or a TVET institution to observe and record how 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	• Cottage industries, salon or any other businesses (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 cottage industries, to observe and record how energy is used to generate products for use by the family, business establishments and local community.