



**REPUBLIC OF KENYA
MINISTRY OF EDUCATION**

JUNIOR SCHOOL CURRICULUM DESIGN

PRE-TECHNICAL STUDIES

GRADE 9

FOR LEARNERS WITH VISUAL IMPAIRMENT



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

A Skilled and Ethical Society

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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 Constitution of Kenya 2010, the Kenya Vision 2030, National Curriculum Policy 2019, the United Nations Sustainable Development Goals (SDGs) and the Regional and Global conventions to which Kenya is a signatory. Towards achieving the mission of Basic Education, the Ministry of Education (MoE) has successfully and progressively rolled out the implementation of the Competency Based Curriculum (CBC) at Pre-Primary, Primary and Junior School levels.

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

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

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

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

HON. EZEKIEL OMBAKI MACHOGU, CBS
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PREFACE

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

The reviewed Grade nine curriculum furthers implementation of the CBC from Grade eight. The curriculum provides opportunities for learners to focus in a field of their choice to form a foundation for further education and training and/or gain employable skills. This is very critical in the realisation of the Vision and Mission of the on-going curriculum reforms as enshrined in the Sessional Paper No. I of 2019 whose title is: Towards Realizing Quality, Relevant and Inclusive Education and Training for Sustainable Development in Kenya. The Sessional Paper explains the shift from a content-focused curriculum to a focus on nurturing every learner's potential.

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

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

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ACKNOWLEDGEMENT

The Kenya Institute of Curriculum Development (KICD) Act Number 4 of 2013 (Revised 2019) mandates the Institute to develop and review curricula and curriculum support materials for basic and tertiary education and training. The curriculum development process for any level of education involves thorough research, international benchmarking and robust stakeholder engagement. Through a systematic and consultative process, the KICD conceptualised the Competency Based Curriculum (CBC) as captured in the Basic Education Curriculum Framework (BECF)2017, that responds to the demands of the 21st Century and the aspirations captured in the Constitution of Kenya 2010, the Kenya Vision 2030, East African Community Protocol, International Bureau of Education Guidelines and the United Nations Sustainable Development Goals (SDGs).

KICD receives its funding from the Government of Kenya to facilitate successful achievement of the stipulated mandate and implementation of the Government and Sector (Ministry of Education (MoE) plans. The Institute also receives support from development partners targeting specific programmes. The revised Grade nine curriculum designs for learners with visual impairments were developed and adapted with the support of the World Bank through the Kenya Primary Education Equity in Learning Programme (KPEELP); a project coordinated by MoE. Therefore, the Institute is very grateful for the support of the Government of Kenya, through the MoE and the development partners for policy, resource and logistical support. Specifically, special thanks to the Cabinet Secretary-MoE and the Principal Secretary – State Department of Basic Education,

I also wish to acknowledge the KICD curriculum developers and other staff, all teachers, educators who took part as panelists; the Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders for their roles in the development and adaptation of the Grade nine curriculum designs for learners with visual impairments. In relation to this, I acknowledge the support of the Chief Executive Officers of the Teachers Service Commission (TSC) and the Kenya National Examinations Council (KNEC) for their support in the process of developing and adapting these designs. Finally, I am very grateful to the KICD Council Chairperson and other members of the Council for very consistent guidance in the process.

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

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NATIONAL GOALS OF EDUCATION

Education in Kenya should:

1. 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.

2. 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 the wake of rapid modernisation. Education should assist our youth to adapt to this change.

b) Economic Needs

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

c) Technological and Industrial Needs

Education in Kenya should provide learners with the necessary skills and attitudes for industrial development. Kenya 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.

3. Promote individual development and self-fulfilment

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

4. 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.

5. Promote social equity 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.

6. 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.

7. 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.

8. Promote positive attitudes towards good health and environmental protection.

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

LESSON ALLOCATION FOR JUNIOR SCHOOL

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

NOTE: Braille skills for learners with Blindness to be implemented as Non formal (Co-Curricular) Programmes

LEARNING OUTCOMES FOR JUNIOR SCHOOL

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

1. Apply literacy, numeracy and logical thinking skills for appropriate self-expression.
2. Communicate effectively, 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 Studies for learners with visual impairment is an integrated learning area at junior school comprising Pre-Technical Studies, Business Studies and Computer Studies. It covers Foundations of Pre-Technical Studies, Communication in the work environment, materials of production, tools and production and entrepreneurship. Learning experiences have been adapted and broken down into smaller deliverable steps to aid the learner with visual impairment acquire critical thinking, problem solving, creativity, innovation, communication, digital literacy and financial literacy skills which are considered for their personal life and the world of work.

This subject is critical at this level as evidenced by the KICD needs assessment report, Kenya vision 2030, Sessional Papers No 1 of 2005 and No 1 of 2019 which recommended the promotion of technical and vocational education with an emphasis on Science, Technology and Innovation (ST&I) in the school curriculum and the UN Convention on the rights of persons with disabilities, 2006. It is also informed by the National ICT Policy of Kenya 2016 (revised 2020) and the PWPER recommendations on the need for adaptation of curriculum and assessment of Special Needs Education.

Pre-Technical Studies for learners with visual impairment at the junior school level recognises that learning and development of competencies is influenced by social-cultural factors, developmental age, instructional opportunities and models as embraced by theories such as the Instructional Design Theory, Vygotsky's Social-Cultural Theory, Gardner's Multiple Intelligence Theory and Piaget's Theory of Cognitive Development. Others are accounting and entrepreneurship theories such as descriptive accounting theory, normative accounting theory and Innovation Theory by Schumpeter among others.

SUBJECT GENERAL LEARNING OUTCOMES

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

- a) Communicate effectively through the use of information and communication technology.
- b) Select and use tools and materials in the production of goods and services.
- c) Use financial and entrepreneurial competencies for prudent decision making.
- d) Observe safety in the immediate environment to promote education for sustainable development.
- e) Apply ICT skills to carry out activities in day-to-day life.
- f) Create awareness on career choices in regard to career pathways and progression for self-development.

SUMMARY OF STRANDS AND SUB STRANDS

Strands	Sub Strands	Suggested Number of Lessons
1.0 Foundations of Pre-Technical Studies	1.1 Safety on Raised Platforms	8
	Handling Hazardous Substances	9
	Self-Exploration and Career Development	6
2.0 Communication in Pre-Technical Studies	2.1 Oblique Projection	14
	2.2 Visual Programming	15
3.0 Materials for Production	3.1 Wood	8
	3.2 Handling of Waste Materials	8
4.0. Tools and Production	4.1 Holding Tools	8
	4.2 Driving Tools	8
	Project	20
5.0 Entrepreneurship	5.1 Financial Services	4
	5.2 Government and Business	6
	5.3 Business Plan	6
Total Number of Lessons		120

STRAND 1.0: FOUNDATIONS OF PRE-TECHNICAL STUDIES

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>1.0 Foundation of Pre-Technical Studies.</p>	<p>1.1 Safety on raised platforms (8 lesson)</p>	<p>By the end of the Sub Strand, the learner should be able to:</p> <ul style="list-style-type: none"> a) identify types of raised platforms used in a workplace, b) describe risks associated with working on raised platforms, c) observe safety when working on raised platforms, d) appreciate the need to observe safety while working on raised platforms. 	<ul style="list-style-type: none"> • Learner with low vision is guided to walk around the school and explore types of raised platforms (ladders, trestles, steps, stands, work benches, ramps). Learner with blindness is paired with their sighted peers as they explore around the school and be given one on one touch and feel with clear verbal description to familiarize with raised platforms used in a workplace (ladders, trestles, steps, stands, work benches, ramps). • Learners brainstorm on the types of raised platforms used in day-to-day life. • Learner with low vision is guided to use a digital device with assistive technology or appropriate print media to search for information on risks associated with working on raised platforms and write notes while learner with blindness is guided to use a digital device with assistive technology or appropriate braille media to search for information on risks associated with working on 	<p>How important is the need to observe safety when working on raised platforms?</p>

			<p>raised platforms and write notes</p> <ul style="list-style-type: none"> • Learners are guided to discuss and present on ways of minimizing risks related to working on raised platforms in the workplace. • Learners with low vision are guided to role play safely working on raised platforms. Learners with blindness are paired with their sighted peers to role play safely working on raised platforms. • Learners with low vision are guided to visit workplaces around the school to observe safety precautions when working on raised platforms. Learners with blindness are paired with their sighted peers to visit workplaces around the school and given one on one demonstration with clear verbal descriptions on how to observe safety precautions when working on raised platforms. 	
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Core competencies to be developed:

- Communication and collaboration: A learner develops speaking, listening and teamwork skills when discussing and presenting on ways of minimizing risks and dangers related to working on raised platforms in workplaces.
- Critical thinking and problem solving: A learner decides and makes inference as they role play safety when working on a raised platform in a workplace.
- Digital Literacy: A learner interacts with and manipulates digital devices with assistive technology as they use audio visual aids to observe risks associated with working on raised platforms.

Values:

- Unity: A learner develops positive relationships as they interact to share learning aids and discuss during learning activities.
- Love: A learner cares for others to avoid injury as they role-play safety when working on raised platforms.
- Responsibility: A learner diligently cares for the audio visual aids when using them to identify types of raised platforms in the workplace.

Pertinent and Contemporary Issues (PCIs):

- Disaster risk reduction: A learner discusses ways of minimizing risks related to working on raised platforms.
- Social cohesion: A learner works with others when using audio-visual aids and discusses risks related to working on raised platforms.

Link to other Learning Areas:

A learner is able to relate skills on safety in a workplace to laboratory safety rules in Integrated Science.

Suggested Learning Resources:

- Print and Braille Pre-Technical Studies textbook.
- Digital resources with assistive technology.
- Realia [stands, ladders, work benches].

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Foundation of Pre-Technical Studies.	1.2 Handling of Hazardous substances. (9 lesson)	<p>By the end of the Sub Strand, the learner should be able to:</p> <ol style="list-style-type: none"> identify hazardous substances found in the immediate environment, classify hazardous substances found in the immediate environment, describe safe ways of handling hazardous substances in the immediate environment, handle hazardous substances safely in the immediate environment, appreciate the importance of observing safety when handling hazardous substances in the immediate environment. 	<ul style="list-style-type: none"> Learner with low vision is guided to use digital devices with assistive technology or relevant print media to search for information on hazardous substances in the immediate environment while learner with blindness uses a digital device with assistive technology or relevant print media to search for information on hazardous substances in the immediate environment. Learners brainstorm and present on hazardous substances found in the immediate environment and take notes. Learners with low vision use charts and pictures to group hazardous substances in the immediate environment. (poisonous, flammable, corrosive, e-waste) while Learners with blindness are guided to use tactile charts to group hazardous substances in the immediate environment. (poisonous, flammable, corrosive, e-waste). Learners with low vision are guided to interpret safety instructions contained in labels and manuals on handling of hazardous substances while learners with blindness are 	<ol style="list-style-type: none"> Why are hazardous substances in the immediate environment labeled? How are hazardous substances handled in the immediate environment?

			<p>paired with their sighted peers to give assistance and given clear verbal descriptions on visual aspects such as diagrams or images. Learners with blindness read through written safety instructions transcribed in braille and encouraged to use other sensory cues such as touch or smell to recognize and differentiate the hazardous substances and interpret safety instructions contained in labels and manuals on handling of hazardous substances.</p> <ul style="list-style-type: none"> ● In groups, learners are guided to discuss safe ways of handling hazardous substances. ● Learners with low vision exercise safe ways of handling hazardous substances in the workplace. Learners with blindness are provided with one on one demonstration on activities that require use of sight during the exercise. ● Learner with low vision is guided to visit a local workplace to observe or listen to a resource person on safe handling of hazardous waste substances. Learner with blindness is paired with their sighted peers to visit a nearby Nema office to explore and listen to verbal descriptions given by a resource person on safe handling of 	
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			hazardous waste substances .	
Core competencies to be developed:				
<ul style="list-style-type: none"> ● Digital literacy: A learner acquires interacting skills when using digital devices to search for information on hazardous materials. ● Communication and Collaboration: A learner develops speaking, listening and self-expression skills as they discuss safe ways of handling hazardous materials in the workplace. ● Learning to learn: A learner develops the skill of sharing knowledge when using charts or tactile charts to group hazardous materials in the workplace. 				
Pertinent and contemporary issues:				
<ul style="list-style-type: none"> ● Disaster risk reduction: A learner’s ability to identify hazards is enhanced when brainstorming on hazardous materials found in the workplace. ● Environmental education and climate change: A learner’s ability to keep the surrounding clean and neat is developed while exercising safe ways of handling hazardous materials in the workplace. 				
Link to other Learning Area:				
<ul style="list-style-type: none"> ● Integrated Science: A learner observes safe handling of waste materials and tours the local environment. ● English: A learner participates in group activities through sharing their ideas and opinions. 				
Suggested Learning Resources:				
<ul style="list-style-type: none"> ● Assorted labels and manuals on handling of hazardous materials. ● Digital devices with assistive technology. ● Print or Braille resource materials. 				

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Foundation of Pre-Technical Studies.	1.3.Self-exploration and career development (6 lesson)	<p>By the end of the Sub Strand, the learner should be able to:</p> <p>a) explain ways of nurturing talents and abilities for self development,</p> <p>b) relate talents and abilities to career pathways in the job market,</p> <p>c) analyze ethical and unethical practices related to the use of talents and abilities,</p> <p>d) choose a suitable career based on talents and abilities for self-</p>	<ul style="list-style-type: none"> ● Learner with low vision is guided to watch video clips on ways of nurturing talents and abilities for business purposes. Learner with blindness is guided to listen to audio-visual clips and documentaries with clear verbal descriptions on ways of nurturing talents and abilities for business purposes. ● Learners are guided to discuss and present on ways of nurturing talents and abilities. ● Learners with low vision are guided to participate in talent shows to nurture talents and abilities. Learners with blindness are paired with their sighted peers and given one on one orientation on space and the immediate environment with clear verbal description to perform and display their talents and abilities. ● Learners with low vision are guided to display talents and abilities through clubs and societies and other planned school fora. Learners with blindness are paired with their sighted peers to provide support and guidance by giving one on one demonstration with clear verbal description to display talents and abilities through clubs and societies and other planned school fora. ● Learner brainstorms, makes a list of talents and abilities and the corresponding career pathways in the senior school. ● Learner with low vision is guided to engage with a resource person on career opportunities related to talents and abilities in Pre-Technical Studies and take notes. Learner with blindness is guided to engage a resource person to provide detailed verbal descriptions on visual content and allow the learner to tactually explore concepts or introduce blind individuals who have excelled in the field of talents and abilities to act as role models or mentors on career opportunities related to talents and abilities in Pre-Technical Studies and take notes. 	<ol style="list-style-type: none"> 1. How can talents and abilities be nurtured? 2. How are career opportunities related to talents and abilities? 3. Why is self-exploration necessary for career development?

		development.	<ul style="list-style-type: none"> • Learner with low vision is guided to search online through digital devices with assistive technology or other relevant print Pre-Technical Studies materials, read and discuss a case study on ethical and unethical practices related to the use of talents and abilities while learner with blindness is guided to search online through digital devices with assistive technology or other relevant braille Pre-Technical Studies materials, read and discuss a case study on ethical and unethical practices related to the use of talents and abilities. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Creativity and imagination: A learner acquires making connections and social networking skills when displaying talents and abilities through clubs and societies and other planned schools fora. • Critical thinking and problem solving: A learner interprets and makes inference when reading and analysing a case study on ethical and unethical practices related to the use of talents and abilities. • Learning to learn: A learner develops self-learning skill when reading and analysing a case study on ethical and unethical practices related to the use of talents and abilities. • Self-efficacy: A learner acquires effective communication skills when organising and participating in talent shows to nurture talents and abilities. 				

Values:

- Integrity: A learner develops accountability when analysing a case study on ethical and unethical practices related to the use of talents and abilities.
- Respect: A learner shows humility by displaying positive regard for self and others when discussing and presenting on ways of nurturing talents and abilities.
- Responsibility: A learner shows determination by engaging in assigned roles and duties when organising and participating in talent shows to nurture talents and abilities.
- Peace: A learner develops empathy by showing respect for diversity when displaying talents and abilities through clubs and societies and other planned school fora.

Pertinent and Contemporary Issues (PCIs):

- Social cohesion: A learner develops cooperation with others when demonstrating their talents and abilities during talent shows.
- Peer education and mentorship: A learner displays talents and abilities through clubs and societies and other planned school activities.

Links to other Learning Areas:

Creative Arts and Sports: A learner enhances creative skill during the display of talents and abilities through clubs and societies and other planned school fora.

Suggested Learning Resources:

Print and Braille Pre-Technical Studies textbooks and other relevant materials.

Digital devices with assistive technology.

Recorded audio-visual clips

Suggested Assessment Rubric

Level Indicator	Exceeds Expectations	Meets Expectation	Approaches Expectation	Below Expectation
Ability to describe risks associated with working on raised platforms	Describes 5 risks associated with working on raised platforms	Describes 4 risks associated with working on raised platforms	Describes 3 risks associated with working on raised platforms	Describes less than 3 risks associated with working on raised platforms
Ability to describe safe ways of handling hazardous substances in the environment	Describes 6 safe ways of handling hazardous substances in the environment.	Describes 5 safe ways of handling hazardous substances in the environment.	Describes 4 safe ways of handling hazardous substances in the environment.	Describes less than 4 safe ways of handling hazardous substances in the environment.
Ability to analyse talents and abilities for business purposes stating possible careers related to it.	Analyses 6 talents and abilities for business purposes illustrating possible careers related to it.	Analyses 5 talents and abilities for business purposes stating possible careers related to it.	Analyses 3-4 talents and abilities for business purposes stating few careers related to it.	Analyses less than 3 talents and abilities for business purposes but has minimal understanding on the possible careers related to it.

STRAND 2.0: COMMUNICATION IN THE PRE-TECHNICAL STUDIES

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key inquiry question(s)
<p>2.0 Communication in Pre-Technical studies.</p>	<p>2.1 Oblique Projection. (14 lesson)</p>	<p>By the end of the Sub Strand, the learner should be able to:</p> <ol style="list-style-type: none"> explain the characteristics of oblique drawing in technical fields, sketch given drawings in oblique projection, draw shaped blocks in oblique projection, appreciate the application of oblique projection in Pre-technical Studies. 	<ul style="list-style-type: none"> Learner with low vision is guided to use a digital device with assistive technology or appropriate print media to search for information on characteristics of oblique drawings. Learner with blindness is guided to listen to a video clip and given clear verbal descriptions of the video clip on characteristics of oblique drawings. Learner brainstorms on the characteristics of oblique drawings and present findings to peers. Learners with low vision are guided to discuss the steps for drawing three-dimensional diagrams in oblique. Learners with blindness are guided to discuss steps in forming three-dimensional shapes using plasticine or clay. Learner with low vision draw three-dimensional diagrams in oblique form without using instruments. Learner with blindness are guided to 	<p>How do you draw diagrams in oblique? How are oblique drawings used in the technical field?</p>

			<p>manipulate and interpret tactile three-dimensional drawings created using raised lines, textured and with different materials to make it accessible to touch. raised lines are used to represent the edges.</p> <ul style="list-style-type: none"> • In groups learners with low vision use drawing instruments to construct three dimensional diagrams in oblique. Learners with blindness are guided to create three-dimensional shapes such as cubes, rectangular prisms and pyramids using plasticine or clay and place them on a workplace to interpret. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and collaboration: A learner develops speaking, listening and self-expression skills when brainstorming on the characteristics of oblique drawings. • Critical thinking and problem solving: A learner develops interpretation and inference skills by searching and exploring different options of drawing three-dimensional diagrams in oblique. 				
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> • Peer education and mentorship: A learner enhances practice skills as they discuss the steps for drawing three-dimensional diagrams in oblique. • Social cohesion: A learner develops the ability to relate well with others as they brainstorm on the characteristics of oblique drawings. 				
<p>Values:</p> <ul style="list-style-type: none"> • Responsibility: A learner enhances diligence as they care for the print and digital media as well as drawing instruments when learning how to draw three dimensional objects in oblique. • Unity: A learner enhances cooperation with others as they use audio-visual aids in groups to search for information on and discuss characteristics of oblique drawings. 				

Link to other Learning Areas:

- Creative Arts and Sports: A learner makes free-hand pictures of three-dimensional objects.
- Visual Art: A learner makes free-hand pictures of three-dimensional objects.
- Mathematics: A learner makes oblique drawings to specific dimensions in technical drawing.
- English: A learner shares opinions, ideas and feelings while carrying out group activities.

Suggested learning resources:

- Three-dimensional wooden block.
- Plasticine or modeling clay.
- Digital devices with assistive technology.

Sub Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>2.0 Communication in Pre-Technical studies.</p>	<p>Visual Programming (15 lessons)</p>	<p>By the end of the Sub Strand, the learner should be able to:</p> <ol style="list-style-type: none"> a) explain the application areas of visual programming software in solving problems, b) create an application using visual programming software for solving problems in day-to-day life, c) embrace the use of visual programming in day-to-day life. 	<ul style="list-style-type: none"> ● Learner with low vision is guided to use a digital device with assistive technology or relevant available print materials with appropriate colour contrast, print resources to search for information on the application areas of visual programming software in solving problems (mobile programming and web development) while learner with blindness is guided to use digital devices with assistive technology or relevant available braille materials, braille resources to search for information on the application areas of visual programming software in solving problems (mobile programming and web development). ● Learners are guided to discuss and present the application areas of visual programming software in solving problems. ● Learner with low vision search and play an audio-visual clip on how to develop an application using visual programming 	<p>How are applications developed using visual programming software?</p>

			<p>software (games and stories) and take notes. Learners with blindness are guided to use digital devices with assistive technology to search for YouTube tutorials that provide audio description for learners to follow along with the visual aspects on how to develop an application using visual programming software (games and stories) and take notes.</p> <ul style="list-style-type: none"> • Learner with low vision is guided to develop an application using visual programming software (games and stories). Learner with blindness is guided to first choose visual programming software (games and stories) that works well with screen readers and provides an interface that is navigable through the keyboard commands and use it to create an application. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Self-efficacy: A learner develops leadership skills as they share experiences on application areas of visual programming with peers. • Critical thinking and problem solving: A learner develops open minded and creativity skills as they create an application using visual programming software. 				
<p>Value: Social justice: A learner unites with others as they work in groups to develop applications.</p>				

Pertinent and Contemporary Issues (PCIs):

- Peer education and mentorship: A learner promotes interpersonal relationships as they discuss the application areas of visual programming software.
- Internet safety and security: A learner becomes a responsible online user as they use digital devices with assistive technology
- or other relevant available resources to search for information on the application areas of visual programming.

Link to other Learning Areas:

Mathematics: A learner uses visual programming concepts to solve problems.

Suggested Learning Resources:

- Digital devices with assistive technology.
- Print and Braille Pre-Technical Studies resource materials.

Suggested Assessment Rubric				
Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to draw three-dimensional block diagrams in oblique drawing.	Draws three-dimensional block diagrams in oblique drawing.	Draws 4 three-dimensional block diagrams in oblique drawing.	Draws 3 three-dimensional block diagrams in oblique drawing.	Draws less than 3 three-dimensional block diagrams in oblique drawing.
Ability to explain the application areas of visual programming.	Explains 7 application areas of visual programming.	Explains 5-6 applications areas of visual programming.	Explains 3-4 application areas of visual programming.	Explains less than 3 application areas of visual programming.
Ability to create an application using visual programming software for solving problems in day-to-day life.	Creates 4 applications using visual programming software for solving problems in day-to-day life.	Creates 3 applications using visual programming software for solving problems in day-to-day life with little demonstrations.	Creates 2 applications using visual programming software for solving problems in day-to-day life.	Creates less than 2 application using visual programming software for solving problems in day-to-day life.

STRAND 3.0: MATERIALS FOR PRODUCTION

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>3.0 Materials for production</p>	<p>3.1 Wood (8 lessons)</p>	<p>By the end of the Sub Strand, the learner should be able to:</p> <ul style="list-style-type: none"> • classify wood according to physical characteristics, • describe the preparation of wood for use in the production of items, • relate types of wood to their uses in the community, • value the importance of wood in day-to-day life. 	<ul style="list-style-type: none"> • Learner with low vision is guided to use a digital device with assistive technology or relevant available print materials with appropriate colour contrast to search for information on the types of wood used at the workplace while learner with blindness use digital devices with assistive technology or relevant available braille materials to search for information on the types of wood used at the workplace. • Learner with low vision is guided to sort wood into either softwood or hardwood. Learner with blindness is paired with their sighted peers and given one on one touch and feel with clear verbal description on the characteristic of the woods.(softwood have a smooth and softer texture, hardwood have harder and denser texture) learners run their hands over the wood to feel these differences in texture and sort wood into either softwood or hardwood. • In groups. learners are guided to discuss methods of wood 	<p>Why is wood an important material?</p>

			<p>preparation for use in the workplace (conversion and seasoning).</p> <ul style="list-style-type: none"> • Learners with low vision are guided to visit a local production unit to explore the uses of wood and listen to a resource person. Learners with blindness are paired with their sighted peers to visit a local wood production unit to explore the uses of wood and listen to the verbal description given by a resource person on the uses of wood. • Learners with low vision develop charts to match different types of wood to their uses while learners with blindness create tactile charts to match different types of wood to their uses. • Learners brainstorm and share their findings on the uses of wood in different trades and present the findings. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Digital literacy: A learner develops technology skills when interacting and manipulating digital devices to search for information on types of wood. • Learning to learn: A learner reflects on how different items are made from wood during visit to nearby workplaces. 				
<p>Pertinent and Contemporary Issues (PCI's):</p> <ul style="list-style-type: none"> • Environmental education and climate change: A learner understands the growth process of trees when using print or digital media to search for information on the types of wood used at the workplace. • Peer education and mentorship: A learner participates in group discussion on methods of wood preparation for use in the workplace. 				

Values:

- Unity: A learner cooperates with others when sharing digital and print media to search for information on types of wood.
- Respect: A learner accepts diverse opinions when discussing methods of wood preparation.

Links to other Learning Areas:

- Social Studies: A learner identifies the types of wood used at the workplace.
- English: A learner expresses their ideas, opinions and feelings and acquires communication skills during group activities.

Suggested Learning Resources:

- Pieces of wood.
- Local environment.
- A resource person.
- Print and Braille Pre-Technical Studies Course Book.
- Digital devices with assistive technology.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Materials	3.2 Handling waste materials (8 lessons)	<p>By the end of the sub strand, the learner should be able to:</p> <ol style="list-style-type: none"> a) Identify waste materials found in the immediate environment, b) describe ways of handling waste materials safely in the immediate environment, c) recycle waste materials to make items for day-to-day use, d) appreciate the need for proper waste management in the immediate environment. 	<ul style="list-style-type: none"> • In groups, learners visit the locality to identify waste materials, (plastic, glass, metal, paper, electronic waste, animal waste, construction waste) Learners with blindness are guided as they walk within and around the community for safety. • Learners with low vision use print media or digital devices with assistive technology such as smartphones with screen magnifiers to search for information on safe ways of handling waste materials in the environment while learners with blindness use digital devices with assistive technology such as laptops with JAWS to search for information on safe ways of handling waste materials in the environment. • Learners with low vision make labels of different types of waste materials and how to handle them safely while learners with blindness create tactile labels of different types of waste materials and how to handle them safely before disposal. • Learners with low vision and learners with blindness collect recyclable waste materials from the locality. Learners with blindness are guided by their peers as they walk within the locality 	<ol style="list-style-type: none"> 1. How can we reuse waste materials? 2. Why recycle waste materials to make items for day-to-day use?

			<p>as they collect recyclable materials.</p> <ul style="list-style-type: none"> Learners make different items such as flower vases, beautiful decorations from recyclable waste materials. Learners with blindness are given one on one demonstration on tasks that need use of sight. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> Self-Efficacy: effective communication skills are developed as the learner searches for information on safe ways of handling waste materials in the environment Digital Literacy: learner develops digital skills when interacting and manipulating digital devices to search for information on safe ways of handling waste materials in the environment. 				
<p>Value:</p> <ul style="list-style-type: none"> Responsibility: learner safely handles and disposes waste materials when making household items from waste materials. 				
<ul style="list-style-type: none"> Pertinent and Contemporary Issues (PCIs): Internet Safety and Security: responsible online behaviour is enhanced as learner use digital or print resources to search for information on safe ways of handling waste materials. 				
<p>Link to other subjects</p> <p>Creative Arts: learner enhances design skills when making items from recyclable waste materials.</p>				
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> Digital devices like video. Local work places. Personal protective equipment (PPEs). Safety labels and manuals. Charts. 				

Suggested Assessment Rubric

Indicator	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Ability to classify wood and state its uses in the workplace.	Classifies wood and states 5 uses in the workplace.	Classifies wood and states 4 uses in the workplace.	Classifies wood and states 3 uses in the workplace.	Classifies wood and states less than 3 uses in the workplace.
Ability to describe the preparation of wood for use in production of items	Describes 5 steps in the preparation of wood for use in production of items.	Describes 4 steps in the preparation of wood for use in production of items	Describes 3 steps in the preparation of wood for use in production of items.	Describes less than 3 steps in the preparation of wood for use in production of items.
Ability to identify types of waste materials found in the environment,	Identifies 5 types of waste materials found in the environment and explain each of them.	Identifies 4 types of waste materials found in the environment.	Identifies 3 or three types of waste materials found in the environment.	Identifies less than 3 types of waste materials found in the environment.
Ability to recycle waste materials to make items for day-to-day use	Recycles 5 waste materials to make highly functional items for day-to-day use	Recycles 4 waste materials to make items for day-to-day use	Recycles 3 waste materials to make basic items for day-to-day use	Recycles less than 3 waste materials to make simplistic items for day-to-day use

STRAND 4.0: TOOLS AND PRODUCTION

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 Tools and Production	4.1 Holding tools (8 lessons)	<p>By the end of the Sub Strand, the learner should be able to:</p> <ul style="list-style-type: none"> a) identify holding tools used in the workplace, b) select holding tools for a given task in a workplace, c) use holding tools to perform a given task in a workplace, d) care for holding tools in the workplace, e) appreciate the importance of holding tools in the workplace. 	<ul style="list-style-type: none"> • Learners with low vision are guided to use audio-visual aids or real objects to identify holding tools in a workplace (pliers, clamps, tongs, clips, spanner, vice). Learners with blindness are guided to listen to video clips with clear verbal description on holding tools in a workplace or paired with their sighted peers to manipulate real objects tactually and identify holding tools in a workplace (pliers, clamps, tongs, clips, spanner, vice). • Learners are guided to discuss and present the use of holding tools in the workplace. • Learners with low vision are guided to watch audio visual clips on the safe use of holding tools in the workplace. Learners with blindness are guided to listen to video clips with clear verbal descriptions on the safe use of holding tools in the workplace. • Learners with low vision are guided to demonstrate safe use of holding tools for different tasks. Learners with blindness are given one on one demonstration with clear verbal descriptions of each tool with tactile markers or braille labels for the 	<ol style="list-style-type: none"> 1. Why are holding tools necessary in a workplace? 2. How are holding tools used in a workshop?

			<p>learner to explore the tools through touch and manipulation to familiarize with shape, weight, and purpose and guided to demonstrate on how to appropriately hold and use a specific holding tool for a specific task.</p> <ul style="list-style-type: none"> ● In groups, learners with low vision are guided to use holding tools for given tasks. Learners with blindness are given one on one orientation on space and immediate environment for carrying out a specific task and to appropriately hold a specific tool for a specific task. ● Learners with low vision are guided to safely clean, sharpen, lubricate hinges and joints and store holding tools in the workplace. Learners with blindness are paired with their sighted peers and given hands-on demonstration on correct cleaning and lubrication technique with clear detailed verbal instructions. ● Learners are provided with hands-on practice opportunities and allowed to safely clean, sharpen, lubricate hinges and joints under guidance and store holding tools in the workplace. 	
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Core competencies to be developed:

- Communication and Collaboration: A learner develops listening and speaking skills when discussing the use of holding tools.
- Learning to learn: A learner acquires reflection skills when demonstrating safe use of holding tools to perform given tasks.
- Digital Literacy: A learner develops interacting skills when manipulating audio visual aids on safe use of holding tools.

Pertinent and Contemporary Issues (PCIs):

- Personal safety and security: A learner demonstrates basic safety habits as they safely use holding tools to perform tasks.
- Disaster risk reduction: A learner appreciates the need to maintain and store holding tools in the workplace to their safe use.

Values:

- Unity: A learner co-operates with others during discussions on the safe use of holding tools.
- Responsibility: A learner exercises accountability as they maintain and store holding tools.

Link to other Learning Areas:

- Agriculture and Nutrition: A learner identifies and demonstrates how to use and care for holding tools.
- Integrated Science: A learner uses simple machines to perform different tasks.

Suggested Learning Resources:

- Holding tools(pliers, clamps, tongs and clips).
- Tactile audio-visual aids or audio-video aids.
- Digital device with assistive technology.
- Print and Braille Pre-Technical Studies.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 Tool and Production.	Driving tools (8 lesson)	By the end of the Sub Strand, the learner should be able to: a) identify driving tools used in a workplace, b) select driving tools for a given task in the workplace, c) use driving tools to perform a given task in the workplace, d) care for driving tools in the workplace, e) value the need for driving tools in the workplace.	<ul style="list-style-type: none"> ● Learner with low vision is guided to use visual aids to identify driving tools in a workplace (hammer, screwdriver, spanner, punches, mallets). Learner with blindness is guided to use tactile visual aids or manipulate realia by being given one on one touch and feel the different shapes, textures and sizes, explore their handles to identify driving tools in a workplace (hammer, screwdriver, spanner, punches, mallets). ● Learners with low vision is guided to watch audio-visual clips or use digital devices with assistive technology to search on the use of specific driving tools to perform specific tasks in a workplace and take notes. Learner with blindness is guided to use digital devices with assistive technology to search and listen to video clips with clear verbal descriptions on the use of specific driving tools to perform specific tasks in a workplace and take notes. ● Learners are guided to discuss the use of driving tools in the workplace. ● Learner with low vision is guided to demonstrate safe use of driving tools to perform tasks. Learner with blindness is given one on one 	Why are driving tools necessary in a workplace?

			<p>demonstration and verbal descriptions on how to appropriately hold a specific driving tool and use it for a specific task.</p> <ul style="list-style-type: none"> • Learner with low vision practice how to use driving tools to perform given tasks. Learner with blindness is given one on one orientation on space and immediate environment for carrying out a specific task and to appropriately hold a specific driving tool for a specific task. • In groups, learners with low vision are guided on how to maintain and store driving tools in the workplace. Learners with blindness are given hands-on practise with clear verbal descriptions on maintaining each tool by being taken through steps of cleaning and lubricating the tools for maintenance and storage of driving tools in the workplace. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and Collaboration: A learner develops listening and speaking skills when discussing the use of driving tools • Learning to learn: A learner acquires reflection skills when demonstrating safe use of driving tools to perform given tasks. • Digital Literacy: A learner develops interacting skills when manipulating audio visual devices on safe use of driving tools 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Personal safety and security: A learner demonstrates basic safety habits as they safely use driving tools to perform tasks. • Disaster risk reduction: A learner appreciates the need to maintain and store driving tools in the workplace to their safe use. 				
<p>Values:</p> <ul style="list-style-type: none"> • Unity: A learner co-operates with others when discussing the safe use of driving tools. • Responsibility: A learner exercises accountability as they maintain and store driving tools 				

<p>Link to other Learning Area:</p> <ul style="list-style-type: none"> • Agriculture and Nutrition: A learner identifies and demonstrates how to use and care for driving tools. • Integrated Science: A learner uses simple machines and tools appropriately to perform tasks.
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> • Driving tools (hammer, screwdrivers, spanners, punches and mallets). • Embossed visual aids(charts, diagrams and pictures). • Digital device with assistive technology. • Print and Braille Pre-Technical Studies textbooks.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 Tools and Production.	4.3 Project (24 lessons)	<p>By the end of the Sub Strand, the learner should be able to:</p> <ol style="list-style-type: none"> identify a problem in the locality that can be solved using the skills acquired in Pre-technical studies, select an item that can be made to solve the identified problem, make an item to solve the problem identified using locally available materials, utilize skills learnt in Pre-technical studies to solve problems in day to day life appreciate the importance of the skills learnt in solving problems in day-to-day life. 	<ul style="list-style-type: none"> • Learner with low vision is guided by a resource person to explore the locality to establish problems that can be solved using the skills acquired in this learning area. Learner with blindness is paired with their sighted peers and given clear verbal descriptions by a resource person as they explore the locality to establish problems that can be solved using the skills acquired in this learning area. • Learners are guided to brainstorm on the problems in the locality that can be solved using the skills acquired. • Learner with low vision is guided to use available digital devices with assistive technology or appropriate print 	<p>How do we solve the challenges in day-to-day life using the skills learnt in this study area?</p>

			<p>media to search for information on possible items to solve the identified need while learner with blindness is guided to use available digital devices with assistive technology or appropriate braille media to search for information on possible items to solve the identified need.</p> <ul style="list-style-type: none"> ● Learners are guided to discuss possible items that can be made to solve the identified problem. ● Learners are guided to select one item that can be made using the skills acquired to solve the identified problem. ● Learner with low vision is guided to sketch items that can be made using the skills acquired to solve the identified problem. Learner with blindness is guided to name and list down the items that can be made using the skills acquired to solve the identified problem. ● Learner with low vision is guided to use locally available materials and tools to make the identified item. Learner with blindness is paired with their sighted peers to collect locally 	
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			<p>available materials and familiarize with the tools to be used through tactile exploration. Learners are guided to create a layout or plan for the project using a cardboard or model using clay or plasticine and use the plan to make the identified item.</p> <ul style="list-style-type: none"> • Learner is guided to estimate the cost to determine the price for the item. • Learner with low vision is guided to take photographs of the item and post on a digital portfolio. Learner with blindness is given one on one demonstration on how to hold and use cameras and smartphones to take a picture. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Self-efficacy: A learner acquires effective communication skills when discussing possible items that can be made to solve the problem. • Communication and collaboration: A learner develops speaking and listening skills when brainstorming on the problem in the locality that can be solved using the skills acquired. • Critical thinking and problem solving: A learner develops evaluation and decision making skills when selecting an item that can be made using the skills acquired. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Environmental education: A learner protects natural resources as they use locally available materials and tools to make the identified item. • Financial literacy: A learner estimates the cost to determine the price for the item. • Time management: A learner demonstrates ability to manage time when carrying out the project within a given duration. 				
<p>Values:</p> <ul style="list-style-type: none"> • Responsibility: A learner cares for tools and materials when making the item. • Respect: A learner appreciates diverse opinions of others as they discuss possible items that can be made to solve the identified problem. 				

Link to other Learning Area:

- Mathematics: A learner carries out the works to specified measurements.
- Integrated Science: A learner observes safety when working on the project.

Suggested Learning Resources:

- Digital Portfolio.
- Digital devices with assistive technology.
- Camera.
- Resource person.
- Print and Braille Pre-Technical Studies textbooks.

Suggested Assessment rubric

Level Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify holding tools used in a workplace	Identifies 6 holding tools used in a workplace	Identifies 5 holding tools used in a workplace	Identify 3 - 4 holding tools used in a workplace	Identify less than 3 holding tools used in a workplace
Ability to select driving tools and use for a given task	Selects 6 driving tools and uses them for a given task.	Selects five driving tools and uses them for a given task.	Selects 3- 4 driving tools and uses them for a given task.	Selects less than 3 driving tools and uses them for a given task.
Ability to make an item to solve the identified problem (identify problems, select a problem that can be solved, come up with a solution to the problem, implement the solution, test and present for evaluation).	Makes 5 items to solve the identified problem .	Makes 4 items to solve the identified problem .	Make 2- 3 items to solve the identified problem.	Makes less than 2 items to solve the identified problem.

STRAND 5.0 ENTREPRENEURSHIP

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
5.0 Entrepreneurship	5.1 Financial services (4 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify the financial institutions available in Kenya, b) classify the types of financial institutions in Kenya, c) analyze services offered by financial institutions in Kenya, d) utilize financial services for entrepreneurial development.	<ul style="list-style-type: none"> • Learner with low vision is guided to use print or digital media with assistive technology to search for information on financial institutions available in Kenya, while learner with blindness is guided to use braille or digital media with assistive technology to search for information on financial institutions available in Kenya. • Learners are guided to discuss and present the types of financial institutions in Kenya (banks, insurance, SACCOs, micro finance). • Learner with low vision is guided to use a digital device with assistive technology such as screen readers and other available appropriate print resources to search for information on services offered by financial institutions in Kenya while learner with blindness is guided to use a digital device with assistive technology such as braille display and other available appropriate print resources to search for information on services offered by financial institutions in Kenya. • Learners are guided to use a case study on financial institutions to 	How important are the services offered by different financial institutions in Kenya?

			identify the financial services and take notes.	
Core competencies to be developed:				
<ul style="list-style-type: none"> • Learning to learn: A learner acquires skills of organising self-learning when identifying services offered by financial institutions. • Self-efficacy: A learner develops effective communication skills when discussing and presenting the types of financial institutions in Kenya. • Critical thinking and problem-solving: A learner develops interpretation and inference skills when identifying financial services. • Digital literacy: A learner acquires the skills of connecting and interacting with digital technology when searching for information services offered by financial institutions in Kenya. 				
Values:				
<ul style="list-style-type: none"> • Responsibility: A learner cares for own property and those of others when handling ICT devices while searching for information on financial services. • Unity: A learner displays team spirit and collaborates with others when discussing and presenting on the types of financial institutions in Kenya, • Peace: A learner works in harmony with other members when discussing and presenting the types of financial institutions in Kenya. 				
Pertinent and Contemporary Issues (PCIs):				
Financial literacy: A learner learns about services offered by financial institutions.				
Link to other Learning Area:				
Agriculture and Nutrition: A learner learns about financial services offered to farmers.				
Suggested Learning Resources:				
<ul style="list-style-type: none"> • Digital device with assistive technology. • Print and Braille Pre-Technical Studies. • Resource person. 				

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>5.0</p> <p>Entrepreneurship</p>	<p>5.2 Government and business</p> <p>(6 lessons)</p>	<p>By the end of the Sub Strand, the learner should be able to:</p> <p>a) explain the reasons for government involvement in business in Kenya,</p> <p>b) describe ways of government involvement in business,</p> <p>c) explore types of taxes in Kenya,</p> <p>d) analyse e-Government services in business,</p> <p>e) acknowledge the need to comply with government regulation in business.</p>	<ul style="list-style-type: none"> ● Learner brainstorms and presents the reasons for government involvement in business in Kenya. ● Learner with low vision use print textbooks or digital devices with assistive technology to search for information on ways of Government involvement in business while learner with blindness use braille textbooks or digital devices with assistive technology to search for information on ways of Government involvement in business ● Learner with low vision research from print textbooks or search online from a digital device with assistive technology on the meaning and importance of paying taxes in Kenya, discusses and makes a presentation while learner with blindness research from braille textbooks or search online from a digital device with assistive technology on the meaning and importance of paying taxes in Kenya, discuss and make presentations. ● Learner is guided to discuss and present on the types of taxes in Kenya (income tax, VAT, 	<ol style="list-style-type: none"> 1. Why is it important for the Government to get involved in business? 2. How important is it to pay tax in Kenya?

			<p>corporate tax, excise duty).</p> <ul style="list-style-type: none"> • Learner with low vision is guided to prepare and display posters in the school community on the need to pay tax in Kenya. Learner with blindness is paired with their sighted peers and guided to prepare a tactile poster by creating tactile diagrams using a spur wheel and a mat and provide a detailed description of the diagram written in braille and display tactile posters in the school community on the need to pay tax in Kenya. • In groups, learners are guided to discuss a case study on e-Government services in business. • Learner is guided to use a digital device with assistive technology such as braille display and screen magnifiers to access and interact with e- Government platforms in Kenya. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: A learner develops evaluating and decision making skills when discussing a case study on e-Government services in business. • Digital literacy: A learner develops interacting skills when using ICT tools to access and interact with the e- Government platform in Kenya. • Citizenship: A learner develops social and civic skills when discussing and presenting on the meaning and importance of paying taxes in Kenya. 				
<p>Values:</p> <ul style="list-style-type: none"> • Integrity: A learner acquires accountability skills when discussing and presenting on the meaning and importance of paying taxes in Kenya, 				

- Social justice: A learner learns about the need for government involvement in business to promote fairness and equity across the society.

Pertinent and Contemporary Issues (PCIs):

- Financial literacy: A learner discusses and presents on types of taxes paid in Kenya.
- Social cohesion: A learner brainstorms and presents the reasons for government involvement in business in Kenya.

Link to other Learning Area:

Social Studies: A learner learns about governance.

Suggested Learning Resources

- Digital device with assistive technology.
- Manila papers.
- Print and Braille Pre-technical Studies textbooks and other relevant resources.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
5.0 Entrepreneurship	5.3 Business plan (6 lessons)	By the end of the Sub Strand, the learner should be able to: a) explain the importance of a business plan in entrepreneurship, b) describe the components of a business plan in financial management, c) fill in a business plan template for a given business project, d) embrace the use of a business plan in entrepreneurship.	<ul style="list-style-type: none"> • Learners brainstorm and present the meaning and importance of a business plan. • Learner with low vision uses a digital device with assistive technology or relevant appropriate print resources to search for meaning and importance of business plan while learner with blindness uses a digital device with assistive technology or relevant appropriate braille resources to search for meaning and importance of business plan. • Learners discuss and present the components of a business plan. • Learner reads case studies on the components of a business plan. • Learner with low vision is guided to complete a business plan template. Learners with blindness is guided to use digital devices with assistive technology to access a business plan template using a compatible screen reader software or create a braille 	<ol style="list-style-type: none"> 1. Why is a business plan important to an entrepreneur? 2. How is a business plan prepared?

			business plan template and complete it.	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and collaboration: A learner develops writing skills as they complete a business plan template. • Learning to learn: A learner acquires own learning skills when discussing and presenting the components of a business plan, • Critical thinking and problem solving: A learner acquires evaluation and decision-making skills when completing a business plan template. 				
<p>Values:</p> <ul style="list-style-type: none"> • Respect: A learner shows regard for the input of every member when brainstorming and presenting the meaning and importance of a business plan. • Responsibility: A learner acquires accountability skills when using the available resources to search for the meaning and importance of a business plan from available resources. • Love: A learner respects others when brainstorming and presenting the meaning and importance of a business plan. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Social cohesion: A learner works and cooperates with members of the team when discussing and brainstorming on the meaning and importance of a business plan. • Financial literacy: A learner' financial awareness is enhanced when they discuss and present the components of a business plan. • Time management: A learner develops ability to manage time as work to complete a business plan template 				
<p>Link to other Learning Areas: Agriculture and Nutrition: A learner learns about entrepreneurship.</p>				
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> • Digital device with assistive technology. • Print and braille Pre-Technical Studies textbooks. 				

Suggested Assessment Rubric				
Level Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to analyse types of financial institutions in Kenya and services they offer	Analyses 6 types of financial institutions in Kenya and the services they offer.	Analyses 4-5 types of financial institutions in Kenya and the services they offer.	Analyses 2-3 types of financial institutions in Kenya and the services they offer.	Analyses less than 2 types of financial institutions in Kenya and the services they offer.
Ability to explore ways in which the Government is involved in business.	Explores 6 ways in which the Government is involved in business.	Explores 4-5 ways in which the Government is involved in business	Explores 2-3 ways in which the Government is involved in business	Explores less than 2 ways in which the Government is involved in business
Ability to prepare different business plan by filling in a template	Prepares 5 different business plans by filling in a template.	Prepares 4 different business plans by filling in a template.	Prepares 3 different business plans by filling in a template.	Prepares less than 3 business plans by filling in a template.

APPENDIX 1: GUIDELINES FOR INTEGRATING COMMUNITY SERVICE LEARNING (CSL)

Introduction

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

Milestone	Description
Milestone 1	<p>Problem Identification</p> <p>Learners study their community to understand the challenges faced and their effects on community members.</p> <p>Some of the challenges in the community can be:</p> <ul style="list-style-type: none"> ● Environmental degradation ● Lifestyle diseases, Communicable and non-communicable diseases ● Poverty ● Violence and conflicts in the community ● Food security issues
Milestone 2	<p>Designing a solution</p> <p>Learners create an intervention to address the challenge identified.</p>
Milestone 3	<p>Planning for the Project</p> <p>Learners share roles, create a list of activities to be undertaken, mobilise resources needed to create their intervention and set timelines for execution</p>
Milestone 4	<p>Implementation</p> <p>The learners execute the project and keep evidence of work done.</p>
Milestone 5	<p>Showcasing /Exhibition and Report Writing</p> <p>Exhibitions involve showcasing learners’ project items to the community and reflecting on the feedback</p> <p>Learners write a report detailing their project activities and learnings from feedback</p>

Milestone 6	<p>Reflection</p> <ul style="list-style-type: none"> ● Learners review all project work to learn from the challenges faced. ● They link project work with academic concepts, noting how the concepts enabled them to do their project as well as how the project helped to deepen learning of the academic concepts.
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NOTE: The milestones will be staggered across the 3 terms of the academic calendar.

Assessment of CSL integrated Project

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

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

Strands	Sub Strands	Suggested Assessment Methods	Suggested Learning Resources	Suggested Non-Formal Activities
1.0 Foundations of Pre-Technical studies	1.1 Safety on Raised Platforms	Oral tests Observation Checklist Written test Rubrics Practical work	Raised platforms Video clips and visual aids Personal protective equipment (PPEs)	Learners take a walk around the school and identify types of raised platform
	1.4 Self-Exploration and Career Development	Assignments Self and peer assessment Oral questions Observation	Digital resources Volunteer resource person Relevant textbooks and reference materials Photographs and pictures Charts	Clubs and societies School mentoring and coaching programmes Field visit activities School drama festivals with themes on talents and abilities Discussion by a resource person on careers Parental empowerment and engagement guidelines

2.0 Communicati on.	2.1 Oblique Projection	Oral tests Observation Checklist Written test Rubrics Project Practical work Portfolio	Drawing papers/molding materials Pencils Digital devices with assistive technologies such as; computer, laptop, smart phone or tablets Samples of free hand sketches Three - dimensional realia	Learners take a walk around the school to observe and record the use of oblique drawings in the technical fields.
	2.2 Visual Programming	Rating scales Rubrics Questionnaires Projects Portfolios Oral questions Aural questions, Interview schedules Written tests Anecdotal records Observation schedules Checklists	Reference materials digital devices with assistive technologies. Manilla papers Internet Video clips Audio clips Models Visual programming software	Share experience with the community members on the importance of visual programming in solving day to day problems
3.0 Materials for Production.	3.1 Wood	Oral tests Observation Checklist Written test Rubrics Project Practical work	Assorted Pieces of wood (hard and soft) Career brochures, career magazines Digital devices such as; computer, laptop, smart phone and tablets	Learners visit the locality to explore process of wood preparation and uses

	3.2 Hazardous substance	Oral tests Observation Checklist Written test Rubrics Project Practical work	Digital devices like video Local work places Personal protective equipment (PPEs) Safety labels and manuals Charts	Learners visit a nearby workshop in the locality to observe safe handling of poisonous, flammable and corrosive substances
4.0. Tools and Production.	4.1 Holding Tools	Oral tests Observation Checklist Written test Rubrics Project Practical work	Pliers, Clamps, spanners, vice, Tongs, clips among others Career brochures, career magazines Digital devices such as; computer, laptop, smart phone and tablet	Learners visit the locality and identify the role of holding tools
	4.2 Driving Tools	Oral tests Observation Checklist Written test Rubrics Project Practical work	Hammers, Screw driver, spanner, punches mallets among others Career brochures, career magazines Digital devices such as; computer, laptop, smart phone and tablet	Learners visit work environments around your locality and observe the various uses, care and storage of driving tools

	4.3 Distribution of Goods and Services	Assignments Self and peer assessment Oral questions Portfolio Assessment Observation Rubrics Tests	Digital resources Resource person Relevant textbooks and reference materials Photographs and pictures Charts	Clubs and societies Field visit activities Discussion by a resource person on distribution of goods and services Debates on distribution of goods and services Parental empowerment and engagement guidelines Road shows on distribution of goods and services
	4.4 Project	Portfolio Observation Interview	Digital resources Resource person Relevant textbooks and reference materials Computer software	Field visits to the local community Parental empowerment and engagement guidelines
5.0 Entrepreneurship.	5.1 Financial Services	Assignments Self and peer assessment Oral questions Observation	Digital resources Resource person Relevant textbooks and reference materials	Learners Visit financial institutions to familiarise with financial services Club and societies School drama festivals with themes on financial services Discussion by a resource person on financial services Posters with messages on financial services Debates on financial services Parental empowerment and engagement guidelines

<p>5.2 Government and Business</p>	<p>Assignments Self and peer assessment Oral questions Observation</p>	<p>Digital resources Resource person Relevant textbooks and reference materials Photographs and pictures Charts</p>	<p>Clubs and societies School mentoring and coaching programmes Field visit to Huduma centres Discussion by a resource person on government and business Posters with messages on government and business Parental empowerment and engagement guidelines</p>
<p>5.3 Business Plan</p>	<p>Assignments Self and peer assessment Oral questions Portfolio Assessment Observation Journaling</p>	<p>Digital resources Resource person Relevant textbooks and reference materials Photographs and pictures Charts</p>	<p>Clubs and societies Field visit activities Discussion by a resource person on business plan Posters with messages on business plan Parental empowerment and engagement guidelines</p>