



OCCUPATIONAL STANDARDS REPORTS
for
LEATHER TECHNOLOGY-RQF Level 3

August, 2022

INTRODUCTION

The occupational analysis and competency standards are developed in the framework of the mission of Rwanda Technical Vocational Education and Training Board (RTB) to develop demand-driven competency-based curricula for technical and vocational education and training.

The occupational analysis describes the occupations of leather product maker, leather bench worker operator, hides and skins collection agent, the place of these occupations in the sector, the duties and tasks of a person performing the occupations and provides information about the context of realization of the duties. An indication of the knowledge, skills and attitudes required to perform the occupation is provided as well.

The competency standards are developed on the basis of the Occupational Analysis. They present the competences required to perform the occupation of leather product maker, leather bench worker operator, hides and skins collection agent and the link between the specific and general competences. These competences are further described in elements of competence and performance criteria.

These standards can be used for training of learners in TVET institutions or for training of workers' in the field of leather Technology profession.

COORDINATION AND DEVELOPMENT TEAM

COORDINATION

1.RWAMASIRABO Aimable, Head of Curriculum and Instructional Materials Development Department, RTB

2.KAGABO Hubert, Ag. Program Administrator & Intervention Manager

Facilitation

1. **CYIZA Vedaste**, Water and Irrigation Trades Specialist, RTB
2. **Kagaju Belinda Gladys**, Expert – WPL/ TVET inclusion & Gender, APEFE
3. **NSABIMANA Rene David**, Deputy School Manager, Nyabikenke TVET School
4. **MUSABYIMANA Marie Jeanne**, Deputy School Manager, GSNDP-Cyanika

Editing

5. **UWINEZA Patrick**, Curriculum Editor, ADECOR Rwanda

Participants

#	Names	Organization	Position
1	HABUMUGISHA Michel	RAPROLEP	Chair person
2	KARINGANIRE Eugene	EUA Company	Managing Director
3	HARERIMANA Deo	Cyanika TVET School	Trainer
4	UWITONZE Odette	GAKONI TVET School	Trainer
5	TWAGIRUMUKIZA Innocent	CEFOTRAR TVET	Trainer
6	NYIRABISABO Marthe	JEAN CLAUDE SHOES MAKERS LTD	Managing Director
7	HAZABARISHAKA Joseph	Hindiro TVET School	Trainer
8	MUSASIRE Geoffrey	Gakoni TVET School	Trainer
9	MUKASHYAKA Germaine	Rwanda Leather Value Chain Union	Chairperson
10	UWIMANA Jerome	Administration Assistant & Logistic	APEFE

Table of contents	
INTRODUCTION	2
PART 1: OCCUPATIONAL ANALYSIS	3
1.1. Description of the occupation	3
1.2 DACUM chart	6
1.2.1 DACUM chart of Leather products maker	6
1.3 Tools, Equipment and Materials	10
PART 2 COMPETENCY STANDARDS.....	13
2.1. List of competencies.....	13
2.2 Description of competences	14
Competency 1: Basic drawing principles.....	14
Competency 2: Use leather hand tools, material and equipment	16
Competency 3: Basic notion of leather manufacturing	17
Competency 4: Basics of leather processing	19
Competency 5: Basic stitching operations	20
Competency 6: Perform basic leather components assembling operations	22
Competency 7: Belt fabrication.....	23
Competence 8: Adults and Children' sandal making.....	25

PART 1: OCCUPATIONAL ANALYSIS

1.1. Description of the occupation

1.1.1 Titles of occupation (s)

Leather product maker, Leather bench worker operator, Hides and skins collection agent

1.1.2. Situation in the national and/or regional economy

The occupation is part of the Agriculture and food processing sector. The situation of the occupation is high in the sector. There are more job opportunities in neighboring countries. However, this occupation is more needed in Rwanda as the subsector of Leather Technology is rapidly growing.

Leather product maker, Leather bench worker operator, Hides and skins collection agent can work in various leather craft haberdasheries, garment enterprises where different operations and fabrication are carried out. Learners may work with some autonomy or in a team.

1.1.3. Context of work

1.1.3.1 Types of enterprises in which the occupation is performed

Leather product maker, Leather bench worker operator, hides and skins collection agent can work in the community specifically in small, medium and large leather products companies and can work for both public and private sectors. They can also self-employed or wage employment.

1.1.3.2. Place and scope of practice

Leather product maker, Leather bench worker operator, Hides and skins collection agent is expected to demonstrate knowledge of the product, the materials used in footwear and leather goods, using hand tools, cutting leather by hand, cutting leather by machine, perform the pre-fabrication operations, apply quality standards, work with others, receive and respond to workplace communication, demonstrate work

value and develop understanding of entrepreneurship in the community specifically in small, medium and large leather products companies and can work for both public and private sectors. She/he self-employed or wage employment.

1.1.3.3 Position within the organization

Leather product maker, is supervised by the leather product technician. He /She gives instructions to the cobbler and cooperates with the artisan leather worker in production of sandals and belts using hand tools and equipment and different materials. In addition to this, he/she can perform various activities in process of hides and skins handling. With the use of applied sciences he/she set quality standards of sandals and belts.

Leather bench worker operator, is using the tends machines that wind, shape or give the finishing. He /She can cooperate with the leather products maker, cobbler, artisan leather worker in maintenance tools and equipment and machinery in electrocute and manuals while producing leather products.

Hides and skins collection agent: Is gathering together hides and skins from various slaughter houses, butchers and places where livestock are slaughtered, do the grading, preserving and piling them in the store. He / She work closely with leather products maker to handle hides and skins.

1.1.3.4. Career / professional and personal development

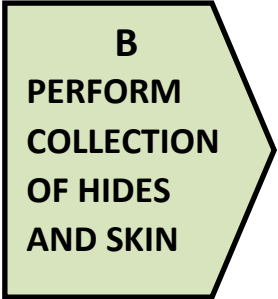
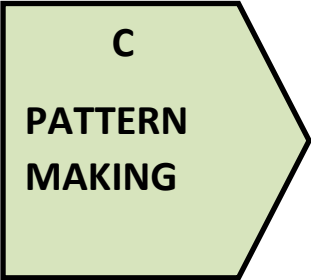
Leather product maker, Leather bench worker operator, hides and skins collection agent can be promoted to Leather products technician and Leather smith after having experience in operation and maintenance of leather electrical machines while performing various tasks such as hydraulic cutting and clicking, straps cutting, splitting, embossing, cementing, zigzag stitching and flat bed, post bed stitching, alters, repair, and lasting foot wears. He/she can be promoted after performing leather processing and grading in a tannery, fabricates various models of ballerina as well as wallets and bags using manual and mechanized methods and estimate the cost of fabricated leather products

in garment. To be promoted as Leather Smith. He/she has to be equipped with professional and employability Skills related to leather work organization and development of innovative designs that can be applied in manufacturing of adults and children's open/closed shoes and advanced leather products like balls. Make Prototypes of different leather products, shoes lasts and molds of different leather products using manually, machines and/or CAD/CAM; communicate and advice customers in selection of quality leather products, and to observe quality parameters of advanced leather products search as bags and closed-shoes and being able to start an own business with a small–medium number of employees, and implementing health and safety standards.

1.2 DACUM chart

1.2.1 DACUM chart of Leather products maker

LEATHER PRODUCTS MAKER							
DUTIES							TASKS
A Use and manage store of hand tools and materials and equipment	A-1 Select and identify tools, materials and equipment	A-2 Perform pre-operation maintenance	A-3 Use tools, materials and equipment	A-4 Rectify minor faults in the stitching machines	A-5 Elaborate specification sheet	A-6 Perform post-operation maintenance of used hand tools and machines	A-6 Store tools, equipment and materials used in a safe manner
	A-7 Keep record on status of used tools, materials and equipment	A-8 Arrange and store tools, materials and equipment	A-9 Report the work done				

	B-1 Identify hides and skins	B-2 Detect defects of hides and skins	B-3 Transport hides to collection center	B-4 Salting of hides and skin	B-5 Drying	B-6 Perform grading of hides and skins	
	B-7 Piling hides and skins						
	C-1 Interpret design specifications	C-2 Select tools, materials and equipment	C-3 Apply drawing	C-4 Masking the last	C-5 Apply drawing	C-6 Cut the patterns	

	C-7 Perform Flattening						
D CONDUCT LEATHER CUTTING AND SKIVE	D-1 Select tools, materials and equipment	D-2 Sharpen tools	D-3 Measuring allowances	D-4 Cut leather components	D-5 Perform skiving		
E APPLY ADHESIVES	E-1 Select appropriate adhesives	E-2 Prepare workplace	E-3 Clean leather surface	E-4 Put adhesives on the cleaned leather surface	E-5 Dry adhesives		E-6 Fold leather components
	E-6 Attach leather folded components	E-7 Press attached components					

F FABRICATE BELT	F-1 Interpret design specifications	F-2 Select tools, materials and equipment	F-3 Make the design	F-4 Prepare pattern for belt(Gents belt, ladies belt and dog belt)	F-5 Convert measurements as per requirements	F-6 Mark and cut belt straps	
	F-7 Shape, decollate & Fold leather belt straps	F-8 Assemble the belt strap to buckle by gluing and fixing	F-9 Finish of the belt				
G FABRICATE SANDALS	G-1 Interpret design specifications	G-2 Select tools, materials and equipment	G-3 Make the design sandals components	G-4 Make patterns for sandals (Gents sandal, ladies sandals)	G-5 Apply pattern on leather	G-6 Mark and cut sandals components	J-6 Draw on leather referring to pattern
	G-7 Skive sandal components	G-8 Decollate& Fold leather sandals straps	G-9 Assemble the sandals	G-10 Lasting of sandals	G-11 Finish of the sandals	G-12 Pack the final products	J-12 Insert toe-puff and stiffener

			components	components			
	G-13 Store Products						
H Assemble leather goods	H-1 Select tools, materials and equipment	H-2 Group leather components	H-3 Apply adhesives	H-4 Fix the rivets/eye-lets	H-5 Fix zipper	H-6 Attach leather components side to side	K-6 Labour lather components
	H-7 Pressing assembled components	H-8 Perform Lining	H-9 Press leather and line				
I Finish leather product	I-1 Select tools, materials and equipment	I-2 Group leather goods to be finished	I-3 Perform cleaning	I-4 Package end product			

1.3 Tools, Equipment and Materials

Tools	Equipment	Materials
Wooden block (30 x 10 x 10cm)	Flatbed sewing machine (power operated) (Single needle capacity	Goat leather 0.6 to 1.0 mm thick

	Leather stitching)	
Marble stone (40 x 40 x 10 cm)	Flatbed sewing machine (manually operated) Single needle capacity leather stitching	Sheep leather 0.6 to 0.8 mm thick
Steel rule 300mm	Cylinder bed sewing machine Single needle capacity Leather stitching	Cow sotty leather 0.7 to 1 mm
Steel rule 600 mm	Skiving machine Leather skiving	Foam rexine
‘L’ square	Cutting machine	Banian rexine
Compass		Lining cloth for cotton
Divider		Synthetic linings (satin cloth)
Scissors 150 mm blade		Colour board
Hammer		Grey board
Clicking knife		Sewing machine needle No : 100, 110, 120 LR
Stitching awl		Sewing machine oil
Punch set No 1 To 10 mm		Sewing machine thread (nylon) 30, 40, 60.
Cutting plier 150 mm		Corners
Set of screw drivers		Zip 3mm
Eyelet setter		Zip 5mm
Measuring tape 2 metres long cotton / plastic		Runner 3mm
French curve set		Runner 5mm
Folding hammer		Press button
Press button die set		Eyelet button
Fibre board		‘D’ Rings
Oil stone 6’x 2’ x 1’		Adjustable buckle
Nylon head hammer		Magnetic lock
Leather thickness measuring gauge		Pipe beading
Work Table Top fixing		Rivet button

with cuddappa stone		
Wooden stools		Dendrite adhesive
Skiving knife		Rubber latex
Clicking Table Top fixing with G. I. sheet		Pigment (season) 100ml.
Polishing brush		
Belt buckles		
Marking pencils		
Dog hooks		
Adjustable buckle		
Magnetic lock		

PART 2 COMPETENCY STANDARDS

2.1. List of competencies

No	Code	competencies	Credit
1.	CCMOL302	Describe the occupation and learning process	3
2.	CCMHE302	Maintain SHE at workplace	3
3.	CCMBC302	Entrepreneurship	3
4.	CCMWC302	Communicate effectively at workplace	3
5.	CCMEN302	Communicate simply using English in familiar situation	3
6.	CCMCL302	Apply computer literacy	3
7.	CCMKN302	Gukoresha Ikinyarwandakiboneye	3
8.	CCMCZ301	Citizenship	3
9.	CCMFT302	Pratiquer l'activité de communication en français dans le métier	3
10.	GENKN302	Kutumia Kiswahili katika Teknolojia ya Ngozi	5
11.	GENAM30	Apply Algebra and Trigonometry	6
12.	GENBC301	Demonstrate Basics of Chemistry	4
13.	GENAP 302	Applied Physics	4
14.	GENAB302	Demonstrate Basic knowledge of General Biology	4
15.	LEHT301	Use leather hand tools, material and equipment	10
16.	LETLP301	Describe basics of leather processing	5
17.	LETBL301	Describe basic notion of leather manufacturing	6
18.	LETTD302	Perform Technical drawing	9

19.	LE TSA301	Perform basic leather components assembling operations	7
20.	LE TSO301	Perform basic stitching operations	8
21.	LE TSM301	Make adults and children's sandals	11
22.	LE TFB301	Fabricate belts	7
23.	LE TIA302	Integrate the workplace	30
Total			143

No	Co-Curricular activities	Credit
1	Sports/Clubs	3
2	Self-study/Library Research	3
Total		6

2.2 Description of competences

2.2 Description of competences

Competency 1: Basic drawing principles

Elements of competency	Performance criteria
1. Distinguish drawing	1.1. Drawing material, instruments and equipment are systematically identified with respect to their uses

instruments, materials and equipment	1.2.	Drawing instruments and equipment are properly described according to their usage
	1.3.	Drawing materials, instruments, and equipment are correctly identified, according to the types of drawing
2. Draw lines, symbols and letters	2.1.	Lines are properly traced according to their types and size
	2.2.	Symbols are properly drawn as used in leather manufacturing
	2.3.	Letters are correctly drawn with respect to types, methods and procedures of lettering
3. Perform 2D and 3D drawing	3.1.	Scale and dimensions are accurately applied in accordance to drawing objects
	3.2.	Neat geometrical figures and objects are precisely drawn as per geometrical rules
	3.3.	Angle projection is correctly performed according to types and methods of angles projection
4. Perform leatherwork drawing plans	4.1.	Drawing sheets layout are properly prepared with respect to drawing standards
	4.2.	Freehand drawing technique is properly applied in accordance with its basic rules and application
	4.3.	Leatherwork drawing plans are effectively drawn as per their use
	4.4.	Leatherwork drawing plans are correctly interpreted in accordance to their titles and block

Skills, Knowledge, and attitudes required to perform the competency

Skills	Knowledge	Attitude
✓ Drawing interpretation skill	✓ Elements of drawing	✓ Organized
✓ Free hand drawing skills	✓ Drawing types	✓ Timely
✓ Select drawing tools	✓ Drawing facilities /tools and materials	✓ Responsive

✓ Performance of 2D&3D		✓ Adaptable ✓ Hard working ✓ Polite ✓ Conscientious ✓ Innovative
------------------------	--	--

Competency 2: Use leather hand tools, material and equipment

Elements of competency	Performance criteria
1.Describe materials, tools, and equipment standards measurement and specifications	1.1.Tools, material and equipment's specification standards are properly identified refer to the purpose and material requirement
	1.2.Standard measurement are clearly distinguished according to the types of lasts, buckles, design and convention system
	1.3.Specification sheet is correctly elaborated in accordance with critical examination and control procedures
2.Prepare materials, tools, and equipment	2.1.Materials, tools, and equipment are properly selected as per their uses
	2.2.The status of materials, tools, and equipment are adequately checked basing to standard specifications
	2.3Materials, tools, and equipment are accurately adjusted as per their functions
3.Use tools, materials, and equipment	3.1.Materials, tools and equipment are properly manipulated in accordance to leather products related operations
	3.2.Materials, tools and equipment are appropriately maintained in reference to their maintenance operation protocol
	3.3.Materials, tools and equipment are safely stored according to their storage conditions

Knowledge, Skills and attitudes required to perform the competency

Skills	Knowledge	Attitude
1. Identification of tools, materials and equipment 2. Description of materials , tools ,and equipment 3. Verification of materials, tools and equipment 4. 5. Specification of tools used 6. Adjustment of equipment used 7. Preparation of materials , tools and equipment	✓ Elements of drawing ✓ Drawing types ✓ Drawing facilities /tools and materials	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working ✓ Polite ✓ Innovative ✓ Conscientious

Competency 3: Basic notion of leather manufacturing

Elements of competency	Performance criteria
1. Describe leatherwork concept	1.1. Leatherwork concept is clearly described in reference to its historical background and leather utility
	1.2. Leatherwork terms are properly defined as per existing literature
	1.3. Classification of leather is properly explained in accordance to their sources and categories

2. Explain the rationale of promoting leatherwork industry	2.1. Usage of leather is clearly explained according to its sources and types of leather products
	2.2. Role of Leatherwork industry is properly described in reference to the development of the country
	2.3. Challenges faced by leatherwork industry are clearly discussed in reference to Rwandan context
3. Discuss the effect of leather manufacturing on human health and environment	3.1. Impact of shoe production is systematically explained in reference to foot anatomy
	3.2. Consequences of leatherwork are clearly explained basing to their effect on human life
	3.3. Environmental impact of leatherwork industry is appropriately explained in accordance to its advantages and disadvantages

Knowledge, Skills and attitudes required to perform the competency

Skills:	Knowledge:	Attitude
✓ Description of leather work ✓ rationale of promoting leatherwork industry ✓ effect of leather industry	✓ characteristics of leather ✓ Types of leather	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working ✓ Polite ✓ Conscientious ✓ Innovative

--	--	--

Competency 4: Basics of leather processing

Elements of competency	Performance criteria
1. Explain basic knowledge of skin/hide and leather	1.1. Skins and hides are clearly distinguished as per their major sources
	1.2. Skin/hide is clearly described according to its basic structure
	1.3. Types of leathers are identified referring to their processing techniques
2. Describe skin and hide production process	2.1. Skin/hide selection is properly discussed based on the quality of skin/hide
	2.2. Skin/hide maintenance is appropriately illustrated as per its preservation methods
	2.3. The storage of dried skin/hide is effectively explained based on its storage conditions
3. Illustrate leather tanning process	3.1. Skin/ hide tanning process is appropriately explained basing on its methods
	3.2. Basic leather tanning process is effectively described in reference to its steps
	3.3. Leather finishing operations are clearly discussed in accordance to methods of finishing
	3.4. Storage of finished leather is adequately explained as per leather grade , size and types

Knowledge, Skills and attitudes required to perform the competency

Skills:	Knowledge:	Attitude
✓ distinguish of leather ✓ selection of leather hides and skins ✓ identification of defect of hides and skins ✓ storage of hides and skins ✓ Illustration of leather tanning process ✓ skills grading	✓ Types of leather ✓ Measuring of leather edge and thickness	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working ✓ Polite ✓ Conscientious ✓ Innovative

Competency 5: Basic stitching operations

Elements of Competency and Performance Criteria	
Elements of competency	Performance criteria
1. Prepare for stitching operations	7.1. The workplace is well prepared in accordance to stitching operation requirements
	7.2. Tools, material and equipment are properly selected according to their uses
	7.3. Leather components are effectively prepared as per product specifications
2. Carry - out stitching operations	2.1. Stitching operations are properly performed in accordance to stitching techniques
	2.2. Hand stitching is adequately performed with respect to stitching steps
	2.3. Stitching operations are effectively performed using manual Stitching machine

3. Perform post - stitching operations	3.1. Finishing of Stitched leather components is adequately performed according to required finishing operations
	3.2. Grouping of stitched leather components is properly done according to their functions
	3.3. Used tools and equipment are accurately handled referring to their maintenance protocol
	3.4. Waste of material are properly handled with respect to waste disposal procedures

Knowledge, Skills and attitudes required to perform the competency

Skills:	Knowledge:	Attitude
✓ Hand stitching skills ✓ Machine pedaling skills ✓ Arm driven machine pedaling skills ✓ Tools, Material selection skills ✓ Tools and equipment maintenance skills ✓ Setting manual stitching machine and tools skills	✓ Anatomy of manual stitching machine ✓ Types of stitching machine ✓ Types of tools and materials ✓ Tools and materials defects and faults ✓ Waste management ✓ Effective and efficiency use of materials	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working ✓ Polite ✓ Conscientious ✓ Innovative

Competency 6: Perform basic leather components assembling operations

Elements of Competency and Performance Criteria

Elements of competency	Performance criteria
1. Prepare the work to be done	1.1. The workplace is well prepared in accordance to the nature of the work to be done
	1.2. Tools, material and equipment are properly selected according to their uses
	1.3. Tools, materials and equipment are adequately pre-maintained in accordance to their maintenance protocol
2. Cut and Skive leather components	2.1. leather components are effectively cut according to the piece's measurements
	2.2. Leather components to be skived are properly identified based on operations to be applied
	2.3. Skiving is appropriately performed in accordance to the products specifications
3. Apply adhesives and fold leather component	3.1. Leather adhesives are correctly chosen as per their uses
	3.2. Leather adhesives are properly used in accordance to the area and their application techniques
	3.3. Leather components are adequately folded according to the folding allowances and folding techniques

Knowledge, Skills and attitudes required to perform the competency

Skills:	Knowledge:	Attitude
✓ Selecting materials skills ✓ Cutting skills ✓ Folding skills ✓ Gluing skills ✓ Attaching skills	✓ Different types of tools and materials ✓ Assembling types ✓ Assembling methods ✓ Detecting materials defects ✓ Waste management ✓ Use of PPE	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working

✓ Glue gun maintenance skills		✓ Polite ✓ Conscientious ✓ Innovative
-------------------------------	--	---

Competency 7: Belt fabrication

Elements of competency	Performance criteria
1. Make belt pattern	1.1. Pattern pieces are properly identified with reference to belt design specifications.
	1.2. Basic pattern is appropriately made based on the types of belt and buckles
	1.3. Final pattern pieces are verified and made in accordance to belt standard measurements
	1.4. Pattern pieces are appropriately marked and stored together as per description.
2. Cut and stitch belt straps	2.1. Belt pattern pieces are correctly copied on leather with respect to type of model consistency and leather economy .
	2.2. Cutting of belt straps are appropriately performed considering cutting techniques and accessories.
	2.3. Belt straps are effectively stitched as per their functions and design
3. Perform belt finishing	3.1. Accessories are adequately attached to belt as per its size and its design
	3.2. Belt holing is performed in reference to standardized sizes.
	3.3. Finishing works are properly carried out according to belt finishing products specification .

Knowledge, Skills and attitudes required to perform the competency

Skills:	Knowledge:	Attitude
----------------	-------------------	-----------------

✓ Prepare workplace skills ✓ Selecting tools, equipment and materials ✓ Pedaling manual stitching machine ✓ Drawing skills ✓ Cutting and stitching skills ✓ Finishing skills ✓ Measuring skills ✓ Installing buckle skills ✓ Packaging skills	✓ Types of tools and materials ✓ Types of drawing lines ✓ Standard measurements ✓ Sizing and measurement ✓ Anatomy of belt ✓ Use of PPE	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working ✓ Polite ✓ Conscientious ✓ Innovative
---	--	---

Competence 8: Adults and Children' sandal making

Elements of Competency and Performance Criteria	
Elements of competency	Performance criteria
1. Make sandal pattern	1.1. Sandal Pattern pieces are properly Identified based to design specification
	1.2. Basic pattern is properly made as per identified pattern pieces
	1.3. Final pattern is accurately made and verified according to standards measurements
	1.4. Pattern pieces are appropriately marked and store together as per description
2. Cut and stitch sandal components	2.1. Sandal pattern pieces are correctly copied on the leather based on type of model consistency and leather economy
	2.2. Cutting of sandal components are appropriately performed by considering cutting techniques
	2.3. Stitching of sandal components are effectively performed as per their functions
3. Perform hand lasting and attach sole	3.1. Insole is correctly attached to the last as per their design
	3.2. Upper Sandal is effectively attached to the insole based on the model specification
	3.3. Sandal upper and sole are correctly attached using appropriate ,materials and techniques

Knowledge, Skills and attitudes required to perform the competency

Skills:	Knowledge:	Attitude
✓ Prepare workplace skills ✓ Selecting tools, equipment and materials ✓ Pedaling manual stitching machine ✓ Drawing skills	✓ Types of tools and materials ✓ Types of drawing lines ✓ Standard measurements ✓ Sizing and measurement ✓ Anatomy sandal ✓ Surface gluing time ✓ Types of polishes ✓ Waste management	✓ Organized ✓ Timely ✓ Responsive ✓ Adaptable ✓ Hard working

✓ Free hand sketching skills ✓ Pattern making skills ✓ Cutting skills, skiving and folding skills ✓ stitching skills ✓ assembling skills ✓ lasting skills ✓ Finishing skills ✓ Measuring skills ✓ Packaging skills ✓ Maintenance of Equipment ✓ Storing tools, materials and equipment skills.	✓ Use of PPE	✓ Polite ✓ Conscientious ✓ Innovative
--	--	---

Umahiri 9: Kutumia Kiswahili katika Teknolojia ya Ngozi

Kitengo	Vigezo vya kitengo
1. Kutumia misamiati ya Kiswahili kimaandishi na kimazungumzo	1.1 Maamkizi mazuri kulingana na muda wa siku na umri wa mtu.

kimsingi.	1.2 Matumizi ya herufi za Kiswahili na msamiati unaofaa vinatumiwa vizuri kulingana na muktadha husika.
	1.3 Hesabu za Kiswahili zinatumiwa vizuri kimazungumzo na kimaandishi kulingana na matumizi ya idadi.
	1.4 Misamiati mbalimbali inayohusu Teknolojia ya Ngozi inatumiwa vizuri kwa kuzingatia muktadha husika.
2. Kutumia na kubainisha aina za maneno ya lugha ya Kiswahili kimazungumzo na kimaandishi.	2.1 Mabainisho mazuri ya aina mbalimbali za maneno ya Kiswahili yanatumiwa kwa kufuata mtindo wake.
	2.2 Aina mbalimbali za maneno ya Kiswahili zinatumiwa vema kimaandishi na kimazungumzo kulingana na mkutadha.
	2.3 Matumizi sahihi ya ngeli za majina kuhusisha aina za maneno.
3. Kutumia nyakati tofauti za Kiswahili kimaandishi na kimazungumzo.	3.1 Nyakati mbalimbali za Kiswahili zinabainishwa vema kulingana na mtindo wake.
	3.2 Sentensi sahihi za Kiswahili zinatungwa vizuri kimazungumzo na kimaandishi kulingana na nyakati zilizotajwa.
	3.3 Hali za vitenzi katika Kiswahili zinatumiwa vizuri Kimazungumzo na Kimaandishi.

Maarifa muhimu	Stadi muhimu	Mwenendo muhimu
Kujitambulisha kwa usahihi na mawasiliano muhimu Hisabati Maumbo ya vitu mbalimbali	Ubunifu na ugunduzi katika Teknolojia ya Ngozi Ujasiriamali Stadi za mawasiliano Stadi za uchunguzi	Uaminifu Wema Tafakuri tunduizi Ushirikiano

Aina za maneno Nyakati tofauti Utungaji wa sentensi	Utawala wa miradi mbalimbali inayohusu Teknolojia ya Ngozi Utatuzi wa matatizo Stadi za kuchora na kupima	Kujitegemea Ubunifu Uvumilivu Unyenyekevu Utafiti Utawala binafsi Uangalizi Uamuzi Ustadi Ukarimu Usafi Uerevu Utulivu Kujiamini Ushauku
---	---	--