BEE HIVES AND BEE EQUIPMENT CONSTRUCTION

ISCED UNIT CODE: 0214 251 01A

TVETCDACC UNIT CODE: AGR/CU/APIHE/CR/01/3/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: construct bee hives and bee equipment

Duration of Unit: 180hours

Unit Description

This unit specifies the competencies required to construct bee hives. It involves preparing to construct bee hives, constructing Kenya Top Bar Hive, Langstroth Hive, catcher box, observation hive and post construction of hives and catcher box and observation hives

Summary of learning outcomes

By the end of this unit of learning, the trainee should be able to:

S/No	Learning Outcomes	Duration (Hours)
1.	Prepare to construct bee hives	20
2.	Construct Kenya Top Bar Hive	30
3.	Construct Langstroth Hive	30
4.	Construct catcher box	30
5.	Construct observation hive	30
6.	Post construction of hives and catcher box	20
7.	Perform Digital record Keeping	20
Total		**180**

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Methods of assessment
1. Prepare to construct bee hives	1.1 Types of bee hives 1.2 Identification of materials and	• Written test • Observation

Learning Outcome	Content	Methods of assessment
	equipment for construction of bee hives 1.3 Personal protective equipment in bee hive construction	• Third party report • Oral questioning • Interviews
2. Construct Kenya Top Bar Hive	2.1 Identification of materials and equipment for construction of Kenya Top Bar Hive 2.2 Assembling materials and equipment for construction 2.3 Procedure for seasoning timber 2.4 Procedure for plaining timber to the recommended thickness 2.5 Components of the Kenya Top Bar Hive 2.6 Procedure for taking measurements for construction of the Kenya Top Bar Hive 2.6 Procedure for cutting timber 2.7 Construction of different hive components 2.8 Drilling bee entrances holes 2.9 Assembling various components 2.10 Fixing Hive hanging wires 2.11 PPE	• Written test • Observation • Third party report • Oral questioning • Interviews
3 Construct Langstroth Hive	3.1 Identification of Materials and equipment for construction of the Langstroth Hive 3.2 Assembling of Materials and equipment for construction of the Langstroth Hive 3.3 Procedure for seasoning timber	• Written test • Observation • Third party report • Oral questioning • Interviews

Learning Outcome	Content	Methods of assessment
	3.4 Procedure for plaining timber to the recommended thickness 3.5 Components of the Langstroth Hive 3.6 Procedure for taking measurements for construction of the Langstroth Hive 3.7 Procedure for cutting timber 3.8 Construction of different Langstroth hive components 3.9 Making bee entrances 3.10 Assembling various Langstroth Hive components	
4 Construct catcher box	4.1 Types of catcher box(Kenya top bar/langstroth) 4.2 Identification of materials and equipment for construction of the catcher box 4.3 Assembling materials and equipment for construction of the catcher box Procedure for seasoning timber 4.4 Procedure for plaining timber to the recommended thickness 4.5 Components of the catcher box 4.6 Procedure for taking measurements for construction of the catcher box 4.7 Procedure for cutting timber Construction of different catcher box components 4.8 Drilling bee entrances holes 4.9 Assembling various catcher box	• Written test • Observation • Third party report • Oral questioning • Interviews

Learning Outcome	Content	Methods of assessment
	components 4.10Fixing catcher box hanging wires	
5 Construct observation hive	5.1 Identification of Materials and equipment for construction of the observation hive 5.2 Assembling of Materials and equipment for construction of the observation hive 5.3 Procedure for seasoning timber 5.4 Procedure for plaining timber to the recommended thickness 5.5 Components of the observation hive 5.6 Procedure for taking measurements for construction of the observation hive 5.7 Procedure for cutting timber 5.8 Construction of different observation hive components 5.9 Making bee entrances/holes 5.10 Assembling various observation hive components	• Written test • Observation • Third party report • Oral questioning • Interviews
6 Post construction of hives and catcher box	6.1 Types of baits 6.1.1 Baiting methods 6.1.2 Materials for baiting 6.1.3 Procedure for baiting 6.2 Storage of hives and bee equipment 6.3 Management and disposal of waste	• Written test • Observation • Third party report • Oral questioning • Interviews

Learning Outcome	Content	Methods of assessment
7. Perform Digital record keeping	7.1 Meaning and Importance of Word Processing 7.1.1 Creating word documents 7.1.2 Editing word documents 7.1.3 Formatting word documents 7.1.4 Save word documents 7.1.5 Printing word documents 7.2 Observation of netiquette principles 7.3 Performance of internet search 7.4 Execution of electronic mail communication	• Observation • Oral assessment • Portfolio of evidence • Third party report • Written assessment • Project • Practical

Suggested Methods of instructions

- Projects
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Instructor-led facilitation
- Demonstration by trainer
- Practical work by trainees
- Viewing of related videos
- Group discussions
- Projects
- Case studies
- Role play

Recommended Resources for 25 Trainees

General Resources	Tools and Equipment	Materials and Supplies
• 25 Desktop computers/laptops	25 mobile phones	Flashcards
• Internet connection	Telephone	Flip charts
• 1 Projector • 1 Printer		2 packets of assorted colors of whiteboard marker pens
• 1 Whiteboard		Printing papers
• 1 Overhead projectors • Internet • Video clips • Timber • Flat metal bar • Iron sheets • Galvanized aluminum sheets and wire • Cotton material • Goose net • Coffee wire	• File for sharpening • hammers • Wood plainer • Joinery equipment • Tape measure • Drilling machine • Pliers • Sewing machine • Tailoring scissors • Tin snip • PPE • Feeder box • Queen excluder	• 25 sets of Writing materials Stationery • Charts • Baiting material • Wood glue • Paint • Leather/Rexene gloves • Zips and elastic material Nails,