

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

**AGRICULTURE / FISHERY – AGRICULTURAL CROP PRODUCTION
(Exploratory)**

Content Standard	Performance Standard	Learning Competencies	Project / Activities	Assessment	Duration
Lesson 1: PREPARING CONSTRUCTION MATERIALS AND TOOLS					
<p><i>Demonstrate understanding of:</i></p> <ul style="list-style-type: none"> • Farm tools <ul style="list-style-type: none"> ➤ Power tools ➤ Handheld tools • Safety practices in using farm tools and equipment 	<ol style="list-style-type: none"> 1. Appropriate farm tools are identified according to use. 2. Farm tools are checked for faults. 3. Appropriate tools-are safely used according to job requirements and manufacturers' conditions. 	LO1. Select and use farm tools.	<ol style="list-style-type: none"> 1. Observation and inspection of equipment & tools used in crop production. 2. Identifying equipment and tools for specific field activity/job. 3. Observing and recording safety practices in the use of farm equipment and tools and making a catalog or index of safety practices on the use of specific tools. 4. Have an actual/practical experience in the use or operation of motorized, electrically operated equipment and tools including, power and hand held tools used in a particular job in crop production. 	<ul style="list-style-type: none"> • Written test • Performance Test 	5 hours
<ul style="list-style-type: none"> • Manual of farm equipment and specifications • Parts and functions of equipment • Pre-operation and check-up • Safety practices during operations of farm equipment • Calibration and use of farm equipment 	<ol style="list-style-type: none"> 1. Appropriate farm equipment and facilities are identified. 2. Instructional manual of farm equipment are carefully read prior to operation. 3. Pre-operation check-up is conducted in line with manufacturers' manual. 4. Faults in farm equipment and facilities are identified and reported in line with farm procedures. 5. Farm equipment are used according to its function. 	LO2.Select and operate farm equipment.	<ol style="list-style-type: none"> 4. Have an actual/practical experience in the use or operation of motorized, electrically operated equipment and tools including, power and hand held tools used in a particular job in crop production. 5. Make farm observations, attend demonstration & perform practical application of safety practices on the use of equipment and tools. 	<ul style="list-style-type: none"> • Written test • Performance Test 	4 hours

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<ul style="list-style-type: none"> • Preventive maintenance <ul style="list-style-type: none"> ➤ Safety measures and practices in cleaning and storing for different farm tools, equipment and facilities. ➤ Upkeep of equipment 	<ol style="list-style-type: none"> 1. Tools and equipment are cleaned immediately. 2. Routine check-up and maintenance are performed. 3. Farm tools and equipment are regularly sharpened and oiled from time to time. 	LO3.Perform preventive maintenance.	<ol style="list-style-type: none"> 1. Do ocular inspection and practical application of common maintenance activity/practice on the use of equipment and tools. 2. Submit of reports or listing of maintenance activities/procedures on specific equipment or tools. 3. Do regular check-up and inspection of the conditions of the tools and equipment. 	<ul style="list-style-type: none"> • Written test • Performance Test 	4 hours

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Lesson 2: PERFORMING ESTIMATION AND BASIC CALCULATION					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Problem solving procedures • Basic mathematical operations 	<ol style="list-style-type: none"> 1. Job requirements are identified from written or oral communications. 2. Quantities of materials and resources required to complete a work task are estimated. 3. Time needed to complete a work activity is estimated. 4. Accurate estimates for work completion are made. 5. Estimates of materials and resources are reported to appropriate person. 	LO1. Perform estimation.	<ol style="list-style-type: none"> 1. Preparing a simple farm plan and budget for rice, sugar, corn production and etc. 2. Preparing financial statement, cash flow budget for a certain crop production project and determine the Return on Investment (ROI). 3. Computing depreciation costs using various forms of computing depreciation. 	<ul style="list-style-type: none"> • Written Test • Performance test 	6 hours
<ul style="list-style-type: none"> • Basic mathematical operations • Systems of measurement • Units of measurement • Conversion of units • Fractions and decimals • Percentages and ratios • Basic record keeping 	<ol style="list-style-type: none"> 1. Calculations to be made are identified according to job requirements. 2. Correct method of calculation is determined. 3. Systems and units of measurement to be followed are ascertained. 4. Calculations needed to complete work task are performed using the four basic mathematical operations. 5. Appropriate operations are 	LO2. Perform basic workplace calculations.	<ol style="list-style-type: none"> 1. Making a manual or guidebook of units of measurement and conversion tables. 2. Preparation of project proposal. 3. Computing for the total sales, total expenses. gross and net profit and compute ROI. 4. Preparing a program of work , cost estimates and cash flow budget. 	<ul style="list-style-type: none"> • Written Test • Performance test 	5 hours

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	used to comply with the instruction. 6. Result obtained is reviewed and thoroughly checked.				

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Lesson 3: INTERPRETING PLANS AND DRAWINGS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Farm plans and layout • Planting systems in crop production • Farm layouts • Government Plans 	<ol style="list-style-type: none"> 1. Farm plans and layout are designed according to crop grown. 2. Planting systems, and practices are strictly followed according to approved cultural practices. 	LO1. Interpret farm plans and layouts.	<ol style="list-style-type: none"> 1. Prepare an ideal farm/field plan & layout. 2. Interpret a field layout, sketch and plan. 3. Demonstrate proper planting based on field/farm plan. 	<ul style="list-style-type: none"> • Written Test • Performance test 	4 hours
<ul style="list-style-type: none"> • Lay-out plan of irrigation system • Types of irrigation system 	<ol style="list-style-type: none"> 3. Irrigation system plan is interpreted according to established procedures. 4. Different designs of irrigation systems are enumerated standard procedures. 	LO2. Interpret irrigation plan and design.	<ol style="list-style-type: none"> 1. Sketch a plan on irrigation system to suit the topography of the land. 2. Create a miniature irrigation canal based on the actual measurement and using ratio and proportion. 	<ul style="list-style-type: none"> • Written Test • Performance test 	4 hours

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Lesson 4: APPLYING SAFETY MEASURES IN FARM OPERATIONS					
<ul style="list-style-type: none"> • Farm works that involves using chemicals • Personal protective equipment (PPE) used in farms • Basic first aid • Farm emergency procedures regarding safety working environment 	<ol style="list-style-type: none"> 1. Safety measures are applied based on work requirement and farm procedures. 2. Tools and materials are utilized in accordance with specification and procedures. 3. Outfits are worn in accordance with farm requirements. 4. Shelf life and or expiration of materials are checked against manufacturer’s specifications effectively. 5. Hazard in the workplace are identified and reported in accordance with farm guidelines. 	LO1. Apply appropriate safety measures while working in farm.	<ol style="list-style-type: none"> 1. Organized symposium on the prevention of accidents in the work place. 2. Do film showing and critiquing of the show. 3. Demonstrate the proper use of PPE. 4. Simulating first aid procedures. 	<ul style="list-style-type: none"> • Written Test • Performance test 	4 hours
<ul style="list-style-type: none"> • Procedure in cleaning and storing outfits • Technique in storing materials and chemicals • Government requirement regarding farm waste disposal • Waste management system (FPA laws, DENR laws, etc.) 	<ol style="list-style-type: none"> 1. Used outfits are cleaned and stored in line with farm procedure. 2. Unused materials are labeled and stored according to manufacturer’s recommendation and farm requirements. 3. Waste materials are disposed according to manufacturers, government and farm requirements. 	LO2. Safe keep/ dispose tools, materials and outfit.	<ol style="list-style-type: none"> 1. Perform proper labeling, cleaning and, storing of equipment, tools, materials and chemical, including proper waste disposal. 	<ul style="list-style-type: none"> • Written test • Performance test 	4 hours

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Content Standard	Performance Standard	Learning Competencies	Project / Activities	Assessment	Duration
					40 hrs.