Senior High School

DepED
DEPARTMENT OF EDUCATION

# Lesson Exemplar in General TechPro Agri-Fishery Arts

Quarter 1

LE 4

Lesson Exemplar for TechPro-AFA_Agricultural Crops Production Senior High School
Quarter 1: Unit 4



**Development Team**

**Writer:** Sheila M. Carambacan
Region VI
SDO Escalante City

**Validator:** Yasmin G. Montilla
Region IV-A
Division of Quezon

**Language Editor:**

**Consultant:** Dr. Rapahel M. Decena, Jr.
TESDA Provincial Training Center
San Antonio, Quezon

**Learning Area Specialist:** Dr. Blandez C. Tullao

Bureau of Learning Delivery
Bureau of Curriculum Development
Bureau of Learning Resources

Every care has been taken to ensure the accuracy of the information provided in this material. For inquiries or feedback, please write or call the Office of the Director of the Bureau of Learning Resources via telephone numbers (02) 8634-1072 and 8631-6922 or by email at blr.od@deped.gov.ph.

Republic of the Philippines
Department of Education
BUREAU OF LEARNING DELIVERY

**LESSON EXAMPLE FOR STRENGTHENED SHS CURRICULUM**

| UNIT LESSON EXEMPLAR | | | |
|---|---|---|---|
| **Learning Area** | **TECHPRO-AFA** | **Grade level** | **11** |
| **Semester** | **FIRST** | **Quarter** | **1** |

| **I. OBJECTIVES** | |
|---|---|
| **Content Standard** | The learners demonstrate understanding of principles on pre-operative check-up following the manufacturer's manual. |
| **Performance Standard** | The learners perform pre-operative checking of tools, farm implement and equipment in accordance with manufacturer's manual. |
| **Learning Competencies** | **In this lesson, the Grade 11 learners will be able to:**<br>1. perform pre-operative checking of tools, farm implement and equipment in accordance with manufacturer's manual<br>. |

| | |
|---|---|
| **I. REFERENCES & MATERIALS** | **A. References**<br><br>Agricultural Crops Production NC II. Accessed May 6, 2025. https://tesda.gov.ph/Downloadables/TR%20-%20%20Agricuktural20%Crops%Production%20NC%20II.pdf<br><br>Department of Education. 2020. "TLE Agricultural Crop Production: Preparing Materials, Tools, and Equipment for Horticultural Production Work."<br><br>Department of Education. 2020. "Agricultural Crop Production: Farm Tools & Maintenance (Grade 7/8)." StudyLib. https://studylib.net/doc/27069732/7-8.-tle-agricultural-crop-production-quarter-1-module-1.<br><br>Department of Education. K to 12 Basic Education Curriculum Livelihood Education Curriculum Guide Exploratory Courses on Horticulture. Accessed May 13, 2025. https://www.deped.angeles city.com/files TLE/Curriculum%20Guide/Grade%207/K%20to%2012%20CG_HORTICULTURE _v1.0.pdf<br><br>Department of Education. K to 12 Basic Education Curriculum Junior High School Technical Livelihood Education and Senior High School Technical-Vocational-Livelihood Track Agri – Fishery Arts – Agri – Crop Production (NC II). Accessed May 7, 2025. https://www.deped.gov.ph/wp-content/uploads/2019/01/Agricultural-Crops-Production-NC-II-CG.pdf.<br><br>How to Practically and Effectively Maintain Farm Tools and Equipment https://www.godings.com.au/5-top-tips-for-farm-machinery-maintenance/<br><br>Occupational Safety Measures in The Farm. 2024. Accessed May 7, 2025. https://www.slideshare.net/slideshow/occupational-safety-measures-in-the-farm-pptx/271593682<br><br>Technical Education and Skills Development Authority (TESDA). December 2013 Training Regulations: Agricultural Crops Production NC II. |

| | |
|---|---|
| | **B. Materials**<br><br>• Various farm tools and implements (e.g., plows, harrows, sprayers)<br>• Manufacturer's manuals for each tool and implement<br>• Checklists for pre-operative checks<br>• Cleaning and maintenance supplies (e.g., oil, rags, brushes)<br>• Inspection report form |

| | |
|---|---|
| **II. CONTENT** | **Pre-operative checking of tool, implement and simple equipment**<br>• Inspection of tools and implements<br>o Physical Condition<br>o Sharpness<br>o Cleanliness<br>o Functionality<br>o Lubrication and Greasing<br>• Safety Features and Precaution<br>o Protective shield and guards<br>o Safety switches<br>o PPE<br>o Warning Labels<br>• Fuel and Oil Check<br>o Fuel level<br>o Oil level<br>• Battery condition<br>• Operational readiness<br>o Environmental Consideration |
| **III. LESSON OBJECTIVES** | 1.1. explain the importance of pre-operative checking<br>1.2. inspect the tools and implements as to its:<br>• Physical Condition<br>• Sharpness<br>• Cleanliness<br>• Functionality<br>• Lubrication and Greasing<br>1.3. analyze the safety features and precautionary measures<br>1.4. interpret manufacturer's manuals<br>1.5. conduct pre-operative checking following standard procedures<br>1.6. record and report inspection/checking results |

| IV. PROCEDURES | | *Annotation* |
|---|---|---|
| **A. Activating Prior Knowledge** | ***A.1. Activating Prior Knowledge***<br>**Activity 1: Think-Pair-Share**<br>• **Think**: Ask students to read the given scenario. Let them think about the problem and have them answer the questions that follow.<br>During a routine harvest in the Mahayahay Farms, a new combine harvester tipped forward and ended up standing nearly upright. The operator had misjudged the steepness of the terrain and the weight distribution of the grain tank, which was nearly full. Fortunately, no one was injured, but the machine required extensive recovery efforts and repairs.<br>✓ What went wrong in this situation? How could this have been avoided?<br>• **Pair**: Have students pair up and share their experiences with a partner. Encourage students to share not only their stories but also let them identify what specific check or maintenance procedure could have prevented the issue.<br>• **Share**: Ask pairs to share their stories with the class and discuss the consequences of not performing pre-operative checks and call on volunteers to list common pre-operative checks on the board.<br>**Activity 2: Show and Tell**<br>• **Show**: Bring in a variety of farm tools and implements. Show them to the students and ask them to identify any visible issues (e.g., rust, dull blades, dirt) using a checklist. Ask the students:<br>✓ What safety risk might arise if this tool is used in this condition?<br>✓ What safety risk might arise if this tool is used in this condition?<br>• **Tell**: Have students work in small groups to examine the tools, record their observations and propose a maintenance solution for each issue identified. Let each group present one tool and explain the following:<br>✓ What is the issue, how does it affect safety/performance, and what should be done? | *The goal of this activity is to activate students' prior knowledge about farm tools, implements, and equipment, and to help them categorize and understand the functions of these items in agricultural practices. Employing think-pair share-share activity, students will benefit from peer learning, gaining different perspectives and insights that can enhance their own understanding. It fosters critical thinking, communication, and **collaboration skills**, which are essential in professional technical fields. (Teacher can contextualize or localized scenario based on their own context.)* |

| | | |
|---|---|---|
| | **Activity 3: Safety Scavenger Hunt**<br>• Create a list of safety features and precautionary measures (e.g., guards, shields, PPE). Have the learners work in small groups to find these features on the tools and implements provided.<br>• After the scavenger hunt, ask learners to discuss briefly the importance of each safety feature and how it helps prevent accidents.<br><br>***A.2. Establishing the Purpose of the Lesson***<br>*Present to the learners the following lesson objectives and* ***h****ave* them relate to it by sharing insights based on their firsthand experience.<br>1.1 explain the importance of pre-operative checking<br>1.2 inspect the tools and implements as to its:<br>• Physical Condition<br>• Sharpness<br>• Cleanliness<br>• Functionality<br>• Lubrication and Greasing<br>1.3 analyze the safety features and precautionary measures<br>1.4 interpret manufacturer's manuals<br>1.5 conduct pre-operative checking following standard procedures<br>1.6 record and report inspection/checking results | |

| | | |
|---|---|---|
| B. Instituting New Knowledge | ***B.1. Presenting Examples***<br><br>➢ **Video Viewing**: Play the video clip that demonstrates the pre-operative checking process and have them watched the video in 5 minutes. Ask students to pay close attention to the following aspects:<br>1. The steps involved in inspecting tools and equipment.<br>2. How to check for physical condition, sharpness, cleanliness, functionality, and lubrication.<br>3. Safety features and precautionary measures highlighted in the video.<br><br>➢ **Discussion**: After watching the video, facilitate a class discussion with the following questions:<br>1. Which step in the pre-operative check do you think is most critical, and why?<br>2. How would you evaluate the condition of a tool if physical signs are not immediately visible?<br>3. In what ways did the safety measures in the video align—or differ—from what you've practiced or observed before?<br>4. How would you adapt the inspection process shown in the video if you were working with limited time or resources?<br><br>***B.2. Discussing New Concept***<br><br>➢ **Importance of Pre-Operative Checking**<br>Farm tools, farm implements, and equipment help make farm work easier and effective. They are designed to perform a specific function. The design and shape of the tools, implement and equipment should be given proper attention if they are to do their function for which they are made. Pre-operative checking is crucial for ensuring patient safety and the success of the surgery. It involves evaluating the patient's health to identify any potential risks, planning the surgical procedure, and educating the patient about what to expect. This process helps in minimizing complications, optimizing surgical outcomes, and ensuring a smooth recovery. | *In this lesson, the teacher will begin by explaining the importance of understanding pre-operative checking of farm tools, implements and equipment. This film viewing activity integrates the use of ICT in AFA-Agricultural Crops Production," which will engage students by connecting the lesson content to real-life examples and personal experiences, while also encouraging critical thinking and active participation.* |

| | | |
|---|---|---|
| | ➢ **Inspecting Tools and Implements**<br>When inspecting tools and implements, consider the following aspects:<br>• Physical Condition: Check for any signs of wear, damage, or defects. Ensure that handles are intact and there are no cracks or splinters<br>• Sharpness: Ensure that cutting tools are sharp and free from nicks or dull edges. Sharp tools are safer and more effective<br>• Cleanliness: Tools should be clean and free from any debris or contaminants. This is essential to prevent infections and ensure accurate performance<br>• Functionality: Test the tools to ensure they are working correctly. This includes checking moving parts and ensuring they operate smoothly<br>• Lubrication and Greasing: Ensure that all moving parts are properly lubricated to prevent friction and wear. This helps in maintaining the tool's efficiency and longevity<br><br>➢ **Analyzing Safety Features and Precautionary Measures**<br>Safety features and precautionary measures are vital to prevent accidents and ensure a safe working environment. This includes:<br>• Confirming patient identity and surgical site to avoid wrong-site surgery<br>• Reviewing patient allergies and medications to prevent adverse reactions<br>• Ensuring proper sterilization of tools and the surgical environment to prevent infections<br>• Using appropriate personal protective equipment (PPE) to protect the surgical team<br><br>➢ **Interpreting Manufacturer's Manuals**<br>Manufacturer's manuals provide essential information on the proper use, maintenance, and troubleshooting of tools and equipment. To interpret these manuals:<br>• Read the installation instructions to ensure correct setup.<br>• Follow operating procedures to use the equipment safely and effectively.<br>• Adhere to maintenance guidelines to keep the equipment in good working condition.<br>• Use troubleshooting guides to diagnose and fix common issues<br><br>➢ **Conducting Pre-Operative Checking Following Standard Procedures**<br>Standard procedures for pre-operative checking typically include: | *To engage students actively in the learning process by combining traditional lecture methods with interactive discussion techniques, this approach aims to enhance understanding, retention, and application of the lesson content thereby enhancing understanding among learners and makes the lesson more engaging and enjoyable.* |

| | | |
|---|---|---|
| | • Reviewing the patient's medical history and conducting a physical examination<br>• Performing necessary diagnostic tests such as blood tests, imaging studies, and urinalysis<br>• Ensuring all documentation is complete and accurate<br>• Communicating with the surgical team to confirm all details and plans<br><br>➢ **Recording and Reporting Inspection/Checking Results**<br>To record and report inspection results:<br>• Use a standardized format to ensure consistency and clarity<br><br>• Include all relevant details such as date, time, inspector's name, and findings<br><br>• Document any issues or defects and the actions taken to address them<br>• Submit the report to the appropriate person or department for review and follow-up<br><br>***B.3. Developing Mastery***<br>**Activity 1: Hands-On Inspection**<br>**Directions**: Divide students into small groups. Provide each group with a set of tools and equipment. Each group will perform pre-operative checking of tools and equipment by doing the following:<br>• Inspect the physical condition of the tools.<br>• Check the sharpness of cutting implements.<br>• Ensure cleanliness of all tools.<br>• Test the functionality of equipment.<br>• Check for proper lubrication and greasing.<br><br>**Materials**: Various tools and equipment, inspection checklists, manufacturer's manuals.<br><br>Process Questions:<br>1. What specific aspects should you look for when inspecting the physical condition of a tool?<br>2. How can you determine if a cutting tool is sharp enough for use? | *In a TechPro lesson specifically in AFA-Agricultural Crops Production Grade 11 students engages more in a hands-on activity where they perform simple re-operative checking of tools, implements and equipment. This activity helps students understand AFA concepts, develop problem-solving skills,* |

| | | |
|---|---|---|
| | 3. What steps should you take to ensure the cleanliness of a tool?<br>4. How do you test the functionality of a piece of equipment? | *and apply theoretical knowledge in a practical setting.* |

| | | |
|---|---|---|
| **C. Demonstrating Knowledge and Skills** | ***C.1. Finding Practical Application***<br>**Activity: Role-Playing Scenario**<br>**Directions**: Divide the learners into different groups. Each group will perform varied tasks to accommodate diverse learners. Let them practice conducting pre-operative checks in a real-world scenario. Create a role-playing scenario where students act as agricultural technicians performing pre-operative checks. Provide a checklist and guide them through the steps, including reviewing the equipment, performing diagnostic tests, and ensuring all documentation is complete. Students will take turns playing different roles and provide feedback on each other's performance.<br>**Materials**: Role-playing scripts, checklists, tools and equipment.<br>1. Process Questions:<br>Ask the following questions.<br>• What common issues did you find during your inspection?<br>• How did you address any problems you encountered with the tools or equipment?<br>• What recommendations would you make for maintaining the tools and equipment?<br><br>***C.2 Making Generalization***<br>Ask the following questions to generalize key concepts of the lesson.<br>1. What safety features are commonly found on agricultural tools and equipment?<br>2. How does pre-operative checking contribute to the efficiency of farm operations?<br>3. What maintenance procedures are recommended by the manufacturer for the tools you inspected?<br>4. Why is it important to keep accurate records of pre-operative checks? | *Role-playing engages students actively, making them participants rather than passive listeners. This active involvement helps in better retention and understanding of the material. Real-world application allows students to apply theoretical knowledge in practical scenarios, bridging the gap between theory and practice. Integrating collaborative activities encourage learners to work together, share ideas, and learn from each other. This interaction fosters a deeper understanding of the content. These activities help learners develop essential skills such as communication, teamwork, problem-solving, and leadership which can help fosters life long skills among Grade 11 students under the TechPro AFA-* |

| | | |
|---|---|---|
| | ***C.3. Evaluating Learning***<br>**Directions:** When performing pre-operative checking of tools, farm implement and equipment in accordance with manufacturer's manual, explain the significance of pre-operative checks in ensuring the safety, efficiency, and longevity of agricultural equipment by answering the following questions.<br><br>1. Why is pre-operative checking important in agricultural practices?<br>2. What are the potential risks of not performing pre-operative checks?<br>3. How does pre-operative checking contribute to the efficiency of farm operations?<br>4. Why is it important to report the findings of pre-operative checks?<br>5. How do standard procedures ensure the safety and efficiency of operations?<br><br>***C.4. Additional Activities***<br>**Enrichment Activity: Pre-Operative Check Simulation Workshop**<br>Directions: Divide the class into small groups. Each group performs a thorough pre-operative check on their assigned tool or equipment, following the steps outlined in the manufacturer's manual and using the inspection checklist.<br><br>Materials Needed:<br>• A variety of tools and farm equipment (e.g., plows, harvesters, hand tools)<br>• Manufacturer's manuals for each piece of equipment<br>• Inspection checklists<br>• Safety gear (gloves, goggles, etc.)<br>• Lubricants and cleaning supplies<br>• Notebooks and pens for recording findings | *Agricultural Crops Production elective.*<br>*Employing short-answer questions is an effective tool in the teaching and learning process. It promotes critical thinking and assesses understanding in a meaningful way by carefully designing and implementing these questions, the teacher can enhance student engagement. The frequent use of short-answer questions, coupled with constructive feedback, can significantly contribute to learners' academic growth and development.*<br>*This simulation workshop will provide AFA students with practical experience and reinforce the importance of pre-operative checks in maintaining the safety and efficiency of farm tools, farm implements and equipment.* |

| | | |
|---|---|---|
| **VI. UNIT ASSESSMENTS**<br>*(Assessing Learnings)* | Summative Assessment<br>**Test I. Multiple Choice Questions: Choose the letter which corresponds to the correct answer.**<br>1. Why is pre-operative checking important in agricultural practices?<br>a. To increase the weight of the equipment<br>b. To ensure safety and efficiency<br>c. To make the equipment look new<br>d. To reduce the cost of the equipment<br>2. What is one potential risk of not performing pre-operative checks?<br>a. Increased productivity<br>b. Reduced repair costs<br>c. Higher likelihood of accidents<br>d. Longer equipment lifespan<br>3. Which of the following is NOT a key aspect to inspect during pre-operative checks?<br>a. Physical condition<br>b. Sharpness<br>c. Color of the equipment<br>d. Cleanliness<br>4. Why is it important to report the findings of pre-operative checks?<br>a. To maintain accountability and communication<br>b. To increase the weight of the equipment<br>c. To reduce the size of the equipment<br>d. To change the color of the equipment<br>5. How do standard procedures ensure the safety and efficiency of operations?<br>a) By providing inconsistent guidelines<br>b) By reducing the need for training<br>c) By ensuring thorough and consistent checks<br>d) By increasing the cost of operations<br><br>**Test II. Short Answer Questions: Briefly discuss your answers to the following questions.** | |

6. Explain the importance of pre-operative checking in your own words.
7. When inspecting the tools and implements, what are the steps you would take to inspect the sharpness of a cutting tool.
8. What should you do if you find a tool that is not functioning properly during a pre-operative check?
9. How can interpreting the manufacturer's manual help in performing pre-operative checks?
10. Why is it essential to follow standard procedures when conducting pre-operative checks?

**Test III. Practical Examination**

Activity 1: Conduct a practical exam where students perform pre-operative checks on tools and equipment.

- Criteria: Use a rubric to assess their ability to inspect physical condition, sharpness, cleanliness, functionality, and lubrication.
- Feedback: Provide detailed feedback on their performance and areas for improvement.

Activity 2: Inspection Report: Require students to submit a detailed inspection report based on their hands-on activities.

- Criteria: Assess the completeness, accuracy, and organization of their reports.
- Feedback: Offer feedback on their reporting skills and suggest ways to enhance their documentation.

| Indicators | Excellent (5) | Satisfactory (3) | Needs Improvement (2) |
|---|---|---|---|
| **Accuracy and Completeness** | Report is accurate and complete and well organized. | Report is accurate and complete with minor errors. | Inaccurate and incomplete report |

<table>
<tr>
<td></td>
<td>
<table>
<tr><td>Functionality</td><td>Clearly and accurately describes functionality of the tool/implement/equipment</td><td>Describes functions with minor gaps</td><td>Function is unclear or incorrect</td></tr>
<tr><td>Maintenance</td><td>Detailed and accurate maintenance practices provided</td><td>Maintenance practices mostly correct</td><td>Incomplete or incorrect maintenance information</td></tr>
<tr><td>Reflection</td><td>Insightful and honest reflection; shows deep understanding</td><td>Good reflection with some insight</td><td>Minimal or no reflection provided</td></tr>
</table>
</td>
<td></td>
</tr>
<tr>
<td>VII. REFLECTION<br>(Feedback and Continuous Improvement)</td>
<td>
Activity 1: Reflection Journal<br>
Have students keep a journal where they reflect on what they learned, challenges faced, and how they overcame them. Assess the depth of reflection and understanding of the lesson content. Provide comments on their reflections to guide further learning.<br>
Activity 2: Self-Evaluation Checklist<br>
Provide students with a checklist to evaluate their own performance during activities to assess their ability in evaluating critically their own work to help them set goals for improvement.<br><br>
Activity 3: Self-Assessment (For the Teacher)
<ul>
<li>Engagement: How engaged were my students during the lesson? Did they participate actively during the discussions and activities?</li>
<li>Understanding: Did the learners demonstrate a clear understanding of the importance and procedures of performing pre-operative checking? In what way?</li>
<li>Challenges: What challenges or difficulties did I encounter during the lesson? How did I manage to address them?</li>
<li>Successes: What aspects of the lesson went well? What contributed to these successes? Which of my teaching strategies worked well? Why did these work?</li>
</ul>
</td>
<td>Including a reflection part in the learning activities helps the learners connect their own experiences and think critically about its wider implications. This approach not only helps students reflect on their learning but also provides the teacher with valuable feedback to improve their teaching strategies.</td>
</tr>
</table>