

Lesson Exemplar in Agri-Fishery Arts

Quarter 1

LE

1

Lesson Exemplar for General Mathematics
Quarter 1: Unit 1

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LESSON EXEMPLAR

Learning Area	TECHPRO-AFA	Grade Level	11
Semester	FIRST	Quarter	1

I. OBJECTIVES (*Identifying the Goals*)

Content Standard	The learners demonstrate understanding of principles on the overview of Agricultural Crops Production
Performance Standard	The learners demonstrate skills in understanding the overview of Agricultural Crops Production
Learning Competencies	Key Topics Learned in the Previous Grade Level: 1. Basic Plant Propagation 2. Soil Preparation and Gardening 3. Simple Crop Classification 4. Planting Tools and Equipment 5. Care and Maintenance of Plants 6. Benefits of Home Gardening In this lesson, the learners will be able to: discuss the overview of Agricultural Crops Production



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**II. REFERENCES
and MATERIALS**

(Selecting Resources
and Material)

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<i>(These shall be accomplished per topic)</i>	
III. CONTENT	Overview of Agricultural Crops Production • Career and Business Opportunities in Agricultural Crops Production • Challenges in Agricultural Crops Production



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<i>(Sequencing Content)</i>	• Common terminologies in Agricultural Crops Production • Technology and Innovation in Agricultural Crops Production ○ Hydroponics ○ Container Gardening ○ Vertical Gardening ○ Aquaponics ○ Aeroponics ○ Agroforestry ○ Monoculture Artificial Intelligence Genetic Engineering Robotics Machine learning Precision agriculture GPS Drones/Satellite
IV. OBJECTIVES <i>(Setting Clear Objectives and Analyzing the Tasks)</i>	1. discuss career and business opportunities in agriculture 2. familiarize careers and business opportunities 3. discuss importance of Agricultural Crops Production 4. identify challenges in Agricultural Crops Production 5. discuss common terminologies in Agricultural Crops Production 6. discuss different types of gardening
IV. PROCEDURES <i>(Selecting Strategies, Making Meaningful Content, Delivering Lesson and Assessing Learning)</i> This section focuses on selecting learner-centered, evidence-based instructional approaches such as problem-based learning, collaborative tasks, interdisciplinary integration, and technology-enhanced instruction. These strategies are intended to foster active engagement, critical thinking, and adaptability across diverse learning pathways. The chosen approaches and methodologies will be reflected through varied and relevant activities and assessments that emphasize real-world relevance and application, thereby enhancing learner engagement and comprehension. (Each part shall have 2-3 varied activities)	ANNOTATION <i>*Instruction to teacher on how to facilitate the activities.</i> <i>*In the Annotation, explicitly explain how the IDF is applied in each part of the lesson</i>



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A. Activating Prior Knowledge	A.1. Activating Prior Knowledge “Agriculture Brainstorm Carousel” • Divide the class into small groups. Each group rotates among stations with questions posted on the wall: ✓ What jobs exist in agriculture? ✓ What crops are grown locally? ✓ What technology do farmers use? • Each group will write their answers on meta cards at each station, building on previous groups’ ideas. A.2. Establishing the Purpose of the Lesson • Introduce that agriculture is more than just planting and harvesting. It is a science, a business, and a source of innovation. • For this lesson, engage the learners in order for them to discover how agriculture offers exciting careers, business opportunities, and is vital to our country’s future. They will also explore new technologies and how they can be part of this growing industry.	After the carousel, facilitate a whole-class discussion to connect prior knowledge with the lesson ahead. Relevance and Motivation – learners learn best when they understand the “why” behind the lesson.
B. Instituting New Knowledge	B.1. Presenting Examples Real-Life Example: “Meet a Modern Farmer” Show a 5-minute video or read a story about a young Filipino agripreneur who started a hydroponic lettuce farm and now supplies local restaurants. Discussion Prompts:	Contextualization – learning is more meaningful when connected to real-life situations. Ask follow-up questions to engage learners in a meaningful interaction prior to the discussion of new concepts.



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- ✓ What made this business successful?
- ✓ What challenges did the farmer face and how did they solve them?
- ✓ What technologies or business ideas were used?

B.2. Discussing New Concept

- Present a concise definition for Agricultural Crops Production:
“Agricultural crops production is the process of growing plants for food, fiber, fuel, and other uses, using various techniques and resources.”
- Use visuals or a short video clip to illustrate modern crop production methods.
- Emphasize the role of agriculture in daily life and national development.

Key Terms & Definitions:

Agricultural Crops Production: Growing crops for food, fiber, and other uses.

Monoculture: Planting a single crop species over a large area.

Agroforestry: Integrating trees with crops and/or livestock.

Hydroponics: Growing plants in water with nutrients, no soil.

Precision Agriculture: Using GPS, drones, and data to manage farms efficiently.

Scaffolding and Differentiation – Support all learners through clear explanations, visuals, and interactive discussion.



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Career Paths: Farm manager, agricultural technician, agronomist, plant breeder, extension worker, agribusiness owner, urban gardener.

Business Opportunities: Organic farming, farm tourism, seedling production, value-added processing, urban container gardening.

Challenges: Climate change, pests, soil degradation, water scarcity, market fluctuations.

Technologies: Drones for crop monitoring, AI for pest detection, genetic engineering for improved crops, robotics for harvesting.

B.3. Developing Mastery

Concept Mapping (5–8 minutes)

- Create a simple concept map on the board with the central idea: **“Crops Production”**.
- Branch out to key elements:
 - **Inputs** (soil, water, seeds, fertilizers)
 - **Processes** (planting, irrigation, harvesting)
 - **Outputs** (grains, vegetables, fruits)
 - **Challenges** (pests, climate change, cost)
- Encourage students to contribute ideas to expand the map.

Game: “Agri Bingo”

Each learner will be given a bingo card with agricultural terms. Read each definition while the learners mark the correct term. The winners will be called to explain their terms.

Group Task: “Garden Design Challenge”



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	Group the learners into five. Each group will randomly select a gardening type from the bowl (hydroponics, vertical, container, etc.) and will be asked to create a poster or improvised 3D model. They will be given the needed materials, steps, potential challenges, as well as benefits. Each group will present the output to the class for peer feedback. Peer Collaboration: Each group will be given the chance to give constructive comments on each other's posters/models.	
C. Demonstrating Knowledge and Skills	C.1. Finding Practical Application Simulation: "Start-Up Pitch: Agri-Business Edition" - Working with the same group, the learners will be asked to design a simple business plan for a small-scale agricultural venture (e.g., hydroponic lettuce, mushroom farming, urban container garden). The plan must include: ✓ Target market ✓ Startup costs ✓ Chosen technology ✓ Solutions to common challenges - Each group will pitch their proposal. C.2. Making Generalization Discussion Questions: ✓ What are the most promising opportunities in agriculture today?	Performance-Based and Authentic Assessment – learners will be able to apply knowledge in meaningful contexts. Guide the groups by checking in and offering support to those who need help with planning or presentation. After the presentations, ask the learners, "What did you learn about teamwork and problem-solving?". Link this activity to real entrepreneurship by showing another video of a successful agri-business in the country. The teacher will facilitate reflective discussion and concept mapping to guide the learners in making generalization.



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	✓ How can innovation help address the challenges faced by Filipino farmers? ✓ Why is agriculture important for our country's food security and economy? Concept Map: ✓ Individually or in pairs, the learners will be asked to create a concept map summarizing careers, opportunities, challenges, and innovations in agriculture. C.3. Evaluating Learning ✓ Provide a multiple-choice quiz and short-answer items on key terms, careers, business opportunities, and challenges. ✓ Learners will work with their respective groups and answer the interactive quiz flashed on the screen. C.4. Additional Activities For Enrichment: ✓ Learners will be tasked to conduct an interview with a local farmer or agribusiness owner and write a reflection on challenges and innovations observed.	Differentiation and Learner Support – instruction is responsive to all learners' needs.
V. ASSESSMENT <i>(Assessing Learnings)</i>	Written Quiz: 1. Discuss two career opportunities and two business opportunities in the field of Agricultural Crops Production. <i>(Assesses objective 1 & 2: career and business opportunities)</i> 2. Explain why Agricultural Crops Production is important to the Philippines' economy and food security. <i>(Assesses objective 3: importance of agricultural crops production)</i> 3. Identify three major challenges faced by farmers in Agricultural Crops Production and suggest one possible solution for each.	



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	(Assesses objective 4: challenges in agricultural crops production) 4. Match the following agricultural terminologies with their correct definitions (Assesses objective 5: common terminologies): <table><tr><td>Hydroponics</td><td>Agroforestry</td><td>Monoculture</td><td>Precision Agriculture</td></tr></table> ✓ The agricultural practice of cultivating a single crop species over a large area, which can increase efficiency but often reduces biodiversity and increases susceptibility to pests and diseases ✓ A method of growing plants without soil, using water-based nutrient solutions in a controlled environment to optimize growth and resource efficiency ✓ A farming approach that uses advanced technologies like GPS, sensors, and data analytics to manage crops and soil variability, improving efficiency and sustainability ✓ A sustainable land management system that integrates trees and shrubs with crops and/or livestock to enhance biodiversity, productivity, and resilience 5. Compare and contrast two types of gardening (e.g., container gardening and vertical gardening) in terms of space requirement, technology used, and suitability for urban areas. (Assesses objective 6: types of gardening)	Hydroponics	Agroforestry	Monoculture	Precision Agriculture
Hydroponics	Agroforestry	Monoculture	Precision Agriculture		
VI. REFLECTION (Feedback and Continuous Improvement)	“Agri-Connections: My Learning Journey” • To meaningfully close the lesson and reinforce the objectives, guide the learners through a dynamic and interactive reflection activity. • This can be done individually, in pairs, or small groups, and can include written, oral, or creative outputs. Step 1: Think-Pair-Share Think: • Ask the learners to silently reflect and jot down their answers to the following questions: ✓ Which career or business opportunity in agriculture interests you the most, and why? ✓ What is one important thing you learned about the role of agricultural crops production in our country?				



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✓ Which new terminology or technology did you find most interesting or useful?

Pair:

- Learners share their answers with a partner, discussing similarities and differences in their insights.

Share:

- Volunteers share their reflections with the whole class. The teacher can record key ideas on the board or a digital platform.

Step 2: Creative Reflection Choice

“One-Minute Reel”

- Learners will be asked to record and upload a one-minute reel by completing any of the following statements:
 - ✓ “Today, I realized that agriculture is not just about farming, but also about _____.”
 - ✓ “The most surprising thing I learned was _____.”
 - ✓ “I want to learn more about _____ because _____.”
 - ✓ “I can help my family or community by _____.”
- Encourage honest and thoughtful responses; emphasize that there are no wrong answers in reflection.
- Use the sample prompts to connect reflections to the lesson objectives and real-life applications.
- Highlight recurring themes and unique perspectives from the learners.
- Use the insights gathered to inform future lessons, enrichment, or school projects (e.g., starting a class garden, inviting an agriprenneur to speak).
 - This reflective activity helps learners internalize the lesson objectives, recognize the relevance of agricultural education, and empowers them to see their potential role in the field. It also provides the teacher with valuable feedback on learner engagement and understanding.



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