

8

Lesson Exemplar for TLE

Quarter 2

Lesson

5

GOVERNMENT PROPERTY
NOT FOR SALE

Lesson Exemplar for TLE Grade 8
Quarter 2: Week 5
SY/TP 2025-2026

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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.

TLE /QUARTER 2/ GRADE 8**I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES**

A. Content Standards	The learners demonstrate an understanding of the concepts and skills in fisheries
B. Performance Standards	The learners perform the skills in fisheries following safety precautions
C. Learning Competencies and Objectives	<p><i>Learning Competency</i></p> <ul style="list-style-type: none"> • Discuss the uses of tools and equipment in aquaculture • Identify fishing gears used for catching fish • Discuss basic fishing bait methods • Discuss post-harvest handling activities <p><i>Learning objectives</i></p> <p>At the end of the lesson, the students are expected to:</p> <ol style="list-style-type: none"> 1. Identify tools and equipment in aquaculture and their uses 2. Enumerate fishing gears used for catching fish 3. Differentiate basic fishing bait methods
D. Content	Tools and Equipment Used in Aquaculture Fishing Gears Used for Catching Fish Basic Fishing Bait Methods Post-Harvest Handling Activities
E. Integration	SDG 14: Life Below Water

II. LEARNING RESOURCES

Asuncion Jr., R. G. (1997). ABIVA Technology and Home Economics Series. Culture of Aquatic Resources.

Basa, A. (2022, November 19). Why there's "closed season" for fishing certain fishes in specific waters. Manila Bulletin.
<https://mb.com.ph/2022/11/19/why-theres-closed-season-for-fishing-certain-fishes-in-specific-waters>

Canadian Aquaculture. I. Careers in Aquaculture Index — Canadian Aquaculture Industry Alliance

Cudis, C. (2020, October 13). Philippine News Agency. <https://www.pna.gov.ph/articles/1118394>

Debutify. (2023, July 29). Traditional vs. Modern Fishing Methods: Comparing Time-Tested Techniqu. BUZZERFISH. <https://buzzerfish.com/blogs/fishing-tips/traditional-vs-modern-fishing-methods-comparing-time-tested-techniques>

How is my Food Made. <https://www.futurelearn.com/courses/how-is-my-food-made>

Meinam, M. (2022, July 22). International Journal of Science and Research Archive. Importance of fish biodiversity conservation and management (ijsra.net)

OmsonsLabs. (n.d.). Laboratory Thermometer. Omsons Labs. <https://omsonslabs.com/laboratory-thermometer/>

Sheilamea, A. K. (2016, December 27). LESSON2 FISH CULTURE Arajane Karen Sheilamea | Download Free PDF | Spawn (Biology) | Fish. Scribd. <https://www.scribd.com/presentation/406453564/LESSON2-FISH-CULTURE-Arajane-Karen-Sheilamea>

III. TEACHING AND LEARNING PROCEDURE		NOTES TO TEACHERS
A. Activating Prior Knowledge	<p>DAY 1</p> <p>Short Review</p> <p>The teacher will ask the following questions:</p> <ol style="list-style-type: none"> 1. What are the different OHS in Fisheries? 2. Can you give examples or situations for each type of OHS. 3. What are the advantages and disadvantages of organic aquaculture? <p>1. Feedback (Optional)</p>	<p>Answers (Short Review)</p> <ol style="list-style-type: none"> 1. Ergonomic health, physical health, biological, psychosocial health, environmental, chemical 2. Physical Hazards-Slips, trips, and falls on wet or uneven surfaces on fishing vessels or docks. Chemical Hazards-Exposure to hazardous chemicals used in fishing operations, such as fuel, lubricants, and cleaning agents. Biological Hazards: Contact with marine life that may carry diseases or toxins, such as handling shellfish with harmful algal blooms. 3. While organic aquaculture offers numerous potential benefits in terms of environmental sustainability, animal welfare, and market opportunities, it also presents challenges related to higher production costs, lower yields, and certification requirements that need to be carefully considered by producers and stakeholders.
	<p>B. Establishing Lesson Purpose</p> <p>1. Lesson Purpose</p> <p>“Guess the Tool Challenge”</p> <p>Based on the given pictures, guess the tools being shown or described.</p>	



Water Surface Hit by Water Drop from [Wikimedia Commons](#).

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Image from [Flickr](#).

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W _ T _ R _ U _ P



Scientists in a Laboratory by [Pixabay](#), from [Pexels](#).

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Omron Digital Thermometer by [Jürgen Kremb](#), from [Wikimedia Commons](#).

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Image from [Watsons](#)

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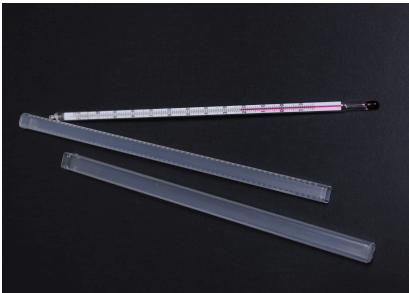

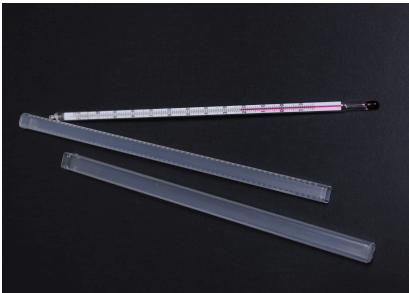

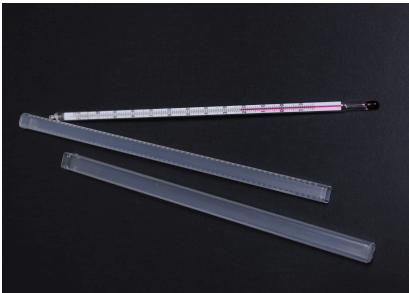
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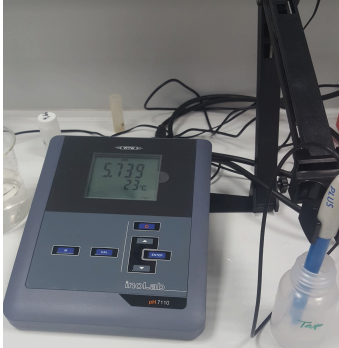
1. Can you enumerate the different tools?
2. Where can we use those tools?
3. Based on our activity what do you think is our lesson today?


2. Unlocking Content Vocabulary

Answers (Lesson Purpose)

1. Water Pump
2. Laborator Thermometer
3. Salinometer

	<ul style="list-style-type: none"> • Salinity -the concentration of dissolved salts in a solution • Versatile- describes something or someone that is capable of adapting or being used in various ways or for various purposes. • Brails- typically refers to ropes or lines used to control the edges or corners of a sail. • Substrate- a material or surface on or in which an organism lives, grows, or is attached. • Sediment- solid particles that settle at the bottom of a liquid or are deposited on the surface of a solid. 										
C. Developing and Deepening Understanding	<p>SUB-TOPIC 1: Tools and Equipment Used in Aquaculture</p> <p>1. Explicitation</p> <ul style="list-style-type: none"> • Tools and Equipment- refer to the various instruments, machinery, and devices used in the management, maintenance, and operation of aquaculture facilities. <table border="1"> <thead> <tr> <th>AQUACULTURE TOOLS</th><th>DESCRIPTION</th><th>IMAGE</th></tr> </thead> <tbody> <tr> <td>Water Pump</td><td>Horizontal and vertical centrifugal pumps are typically used for recirculation purposes. Their working principles are similar, and the main difference between these aquaculture pumps is the shaft's position.</td><td>  <p>Water Pump Industrial Technology Machine from Pickoik.</p> </td></tr> <tr> <td>Laboratory Thermometer</td><td>These are essential tools in aquaculture for monitoring water temperature, ensuring optimal conditions for aquatic organisms, conducting research, and maintaining quality assurance in laboratory settings</td><td>  <p>Laboratory Thermometer from Wikimedia Commons.</p> </td></tr> </tbody> </table>	AQUACULTURE TOOLS	DESCRIPTION	IMAGE	Water Pump	Horizontal and vertical centrifugal pumps are typically used for recirculation purposes. Their working principles are similar, and the main difference between these aquaculture pumps is the shaft's position.	 <p>Water Pump Industrial Technology Machine from Pickoik.</p>	Laboratory Thermometer	These are essential tools in aquaculture for monitoring water temperature, ensuring optimal conditions for aquatic organisms, conducting research, and maintaining quality assurance in laboratory settings	 <p>Laboratory Thermometer from Wikimedia Commons.</p>	
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	<p>Salinometer or Refractometer</p>	<p>Valuable tool for measuring salinity accurately and efficiently, providing essential information for a wide range of scientific, industrial, and environmental applications related to aquatic ecosystems and water management.</p>	 <p>Portable Refractometer from Wikimedia Commons.</p>	
	<p>Dissolved Oxygen Meter</p>	<p>Play a vital role in water quality monitoring and management, providing essential data for ensuring the health and sustainability of aquatic environments and supporting various industries and research activities.</p>	 <p>Dissolved Oxygen Meter from Wikimedia Commons.</p>	
	<p>Ph Meter</p>	<p>Valuable tools for measuring and monitoring pH accurately and efficiently, providing essential information for a wide range of scientific, industrial, and environmental applications.</p>	 <p>pH Meter from Wikimedia Commons.</p>	




Secchi Disk	Measurements are commonly used by scientists, environmental researchers, and citizen scientists for monitoring water quality in lakes, rivers, and coastal areas.	 <p>Image from Flickr.</p>
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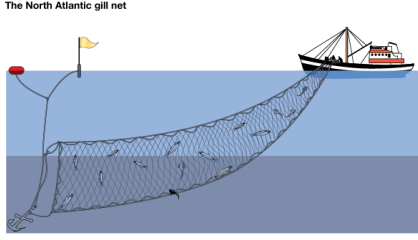
DAY 2



Fishing Gears Used for Used for Catching Fish

- **Fishing gear-** refers to the equipment and tools used by fishers to catch fish or other aquatic organisms.

Fishing Gears	Description	Image
Scoop Net	Versatile and practical tool for collecting aquatic organisms in various aquatic environments, providing valuable information for scientific research, conservation efforts, and recreational activities.	 <p>Scoop Net by Brian H., from Flickr</p>
Seine Net	Versatile and effective tools for catching fish and other aquatic organisms, making them valuable assets in both commercial and recreational fishing activities.	 <p>Seine Net from Wikimedia Commons.</p>

	<p>Cast Net</p> <p>A type of fishing net that is thrown or cast by hand to catch fish and other aquatic organisms. It consists of a circular net with weights along the perimeter and a series of hand loops or "brails" that gather the net when it is retrieved.</p>	 <p>Cast Net from Wikimedia Commons</p>	
	<p>Hand Diggers and Collectors</p> <p>Manual tools used in various aquatic activities to gather or harvest organisms from the substrate or water column.</p>	 <p>Hand Diggers and Collectors from NASA Spinoff</p>	
	<p>Dredges</p> <p>Mechanical devices used to remove sediment, debris, or unwanted materials from the bottom of ponds, lakes, rivers, or coastal areas.</p>	 <p>Dredges by N. A. Dewitt, from Wikimedia Comm</p>	

	Spears	<p>Tools used for catching fish and other aquatic organisms by piercing or impaling them.</p>	 Spears from Sensible Survival
	Stupefying Aids	<p>Substances used in aquaculture and fisheries management to immobilize or stun fish temporarily.</p>	 Image from Fisheries.org
	Hooks and Lines	<p>Also known as angling gear, are traditional and widely used tools in fisheries for catching fish.</p>	 Images from Wikimedia Commons
	Stationery Entangling Nets	<p>Also known as passive fishing gear or fixed fishing gear, are fishing nets that are set in a fixed location and rely on the movement of fish to become entangled.</p>	 <small>© 2010 Encyclopedia Britannica, Inc.</small> Image from Britannica ,

	Stationary enclosures	<p>Also known as fish traps or fish weirs, are fishing structures designed to capture fish as they swim through or around them.</p>	 <p>Stationary Enclosures from Picryl</p>	<div> Answers in Worked Example <ol style="list-style-type: none"> 1. Water Pump 2. Laboratory Thermometer 3. Ph Meter 4. Salinometer 5. Dissolved Oxygen Meter 6. Hooks and Lines 7. Spears 8. Scoop net 9. Cast net 10. Seine net </div>
	Mobile Enclosing Nets	<p>Also known as purse seines, are fishing nets designed to encircle fish in open water and then draw the bottom of the net closed like a purse, trapping the fish inside.</p>	 <p>Mobile Enclosing Nets by Pexels, from Pexels.</p>	

2. Worked Example

Read the story "Tales from the Tides: A Journey in Aquaculture and Fishing" carefully. After reading, make a list of the aquaculture tools, equipment, and fishing gears you identified.

"Tales from the Tides: A Journey in Aquaculture and Fishing"

Once upon a time, nestled along the serene coastline of a small fishing village, there lived a young entrepreneur named Mia. Mia had always been fascinated by the ocean and its bountiful treasures. Determined to make a difference in her community while pursuing her passion, Mia embarked on a journey into the world of aquaculture and fishing.

Armed with her knowledge and a variety of tools and equipment, Mia set out to establish her own aquaculture farm. She carefully selected a site with clean, nutrient-rich waters and began setting up her operation. Among her essential tools were water pump which used for recirculation

purposes, laboratory thermometer, which for monitoring water temperature. She also has valuable tools for measuring and monitoring pH accurately and efficiently, tool for measuring salinity accurately and efficiently and tool which play a vital role in water quality monitoring and management, providing essential data for ensuring the health and sustainability of aquatic environments

As Mia's aquaculture farm flourished, she recognized the importance of sustainable practices. She employed innovative feeding systems that minimized waste and reduced environmental impact. Mia's dedication to sustainability extended to her choice of fishing gears as well. When she ventured into traditional fishing practices, she opted for selective gear like traditional and widely used tools in fisheries for catching fish, tools used for catching fish and other aquatic organisms by piercing or impaling them. She also has different kinds of net, the first type is a versatile and practical tool for collecting aquatic organisms in various aquatic environments, the second one is a type of fishing net that is thrown or cast by hand to catch fish and other aquatic organisms. And the last type is a versatile and effective tool for catching fish and other aquatic organisms, making them valuable assets in both commercial and recreational fishing activities.

3. Lesson Activity
“Sorting Equipment and Gears”

- Group the given words as to EQUIPMENT or GEARS

EQUIPMENT	GEARS
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

DAY 3
SUB-TOPIC 2: Basic Fishing Bait Methods

Answers in Lesson Activity

EQUIPMENT

1. Water Pump
2. Laboratory Thermometer
3. Ph Meter
4. Salinometer
5. Dissolved Oxygen Meter

GEARS

1. Hooks and Lines
2. Spears
3. Scoop Net
4. Cast Net
5. Seine Net

1. Explicitation

Fishing has evolved significantly over the centuries, with both traditional and modern methods standing the test of time. While modern fishing techniques incorporate advanced technology and innovative gear, traditional methods hold a deep-rooted connection to the past.

Traditional Fishing Techniques

- **Hand line Fishing-** Explore the simplicity of hand line fishing, a traditional method where anglers use a single line with bait or lures, often practiced from shore or small boats.
- **Spearfishing-** Dive into the ancient practice of spearfishing, which involves using a spear or trident to catch fish in their natural habitat.
- **Cast Netting-** Discover the art of cast netting, a method still prevalent in many coastal regions, where a weighted net is thrown to capture schools of fish.

Modern Fishing Techniques

- **Rod and Reel Fishing-** Embrace the versatility of rod and reel fishing, offering precision casting and better control over the fight with fish.
- **Trolling-** Utilize modern trolling techniques, which involve trailing lures or baited lines behind a moving boat to cover a larger area and target active fish.
- **Fly Fishing-** Dive into the art of fly fishing, employing specialized rods and artificial flies to mimic insects and entice selective fish species.

DAY 4

Post-Harvest Handling Activities

1. Sorting and Grading- involves the separation of harvested products based on various criteria, such as quality, size and shape.

a. Size and Weight Sorting- Fish are sorted based on their size, which may influence market value and consumer preferences. Larger fish may command higher prices in some markets, while smaller fish may be preferred for specific culinary purposes.

b. Quality Sorting- Fish are visually inspected for quality attributes such as color, texture, firmness, and overall appearance. Damaged, bruised, or discolored fish are sorted out to prevent them from affecting the quality of the entire batch.

	<p>2. Storing- This is essential for preserving the freshness, quality, and safety of fish. By following these guidelines, fish producers and seafood handlers can ensure that their products reach consumers in optimal condition, maximizing their value and satisfaction.</p> <p>2. Worked Example Identify whether Traditional Fishing Technique or Modern Fishing Technique. Write TF for Traditional and MF for Modern Fishing.</p> <p>____ 1. Spearfishing ____ 2. Trolling ____ 3. Hand line fishing ____ 4. Cast Netting ____ 5. Fly fishing</p> <p>3. Lesson Activity</p> <ul style="list-style-type: none">Let the students search for different words related to the topic discussed in this lesson. Connect the letters with zigzag lines. <table><tr><td>S</td><td>M</td><td>M</td><td>C</td><td>H</td><td>K</td><td>G</td><td>F</td><td>L</td></tr><tr><td>T</td><td>O</td><td>T</td><td>A</td><td>X</td><td>F</td><td>R</td><td>L</td><td>D</td></tr><tr><td>O</td><td>D</td><td>R</td><td>S</td><td>G</td><td>H</td><td>A</td><td>Y</td><td>B</td></tr><tr><td>R</td><td>E</td><td>O</td><td>T</td><td>F</td><td>H</td><td>D</td><td>F</td><td>L</td></tr><tr><td>I</td><td>R</td><td>L</td><td>N</td><td>I</td><td>A</td><td>I</td><td>I</td><td>F</td></tr><tr><td>N</td><td>N</td><td>L</td><td>E</td><td>B</td><td>N</td><td>N</td><td>S</td><td>H</td></tr><tr><td>G</td><td>Q</td><td>I</td><td>T</td><td>S</td><td>D</td><td>G</td><td>H</td><td>B</td></tr><tr><td>Q</td><td>Z</td><td>N</td><td>T</td><td>T</td><td>L</td><td>Y</td><td>I</td><td>Z</td></tr><tr><td>I</td><td>G</td><td>G</td><td>I</td><td>Y</td><td>I</td><td>T</td><td>N</td><td>D</td></tr><tr><td>R</td><td>O</td><td>D</td><td>N</td><td>A</td><td>N</td><td>G</td><td>G</td><td>X</td></tr><tr><td>S</td><td>H</td><td>Z</td><td>G</td><td>R</td><td>E</td><td>E</td><td>L</td><td>G</td></tr></table>	S	M	M	C	H	K	G	F	L	T	O	T	A	X	F	R	L	D	O	D	R	S	G	H	A	Y	B	R	E	O	T	F	H	D	F	L	I	R	L	N	I	A	I	I	F	N	N	L	E	B	N	N	S	H	G	Q	I	T	S	D	G	H	B	Q	Z	N	T	T	L	Y	I	Z	I	G	G	I	Y	I	T	N	D	R	O	D	N	A	N	G	G	X	S	H	Z	G	R	E	E	L	G	<p>Answers (Worked Example)</p> <p>1. TF 2. MF 3. TF 4. TF</p> <p>Answers (Lesson Activity)</p> <p>1. STORING 2. MODERN 3. TROLLING 4. CAST NETTING 5. HANDLINE 6. GRADING 7. FLY FISHING 8. ROD 9. REEL 10. STORING</p>
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<p>D. Making Generalizations</p>	<p>1. Learners’ Takeaways</p> <ul style="list-style-type: none">What are the two basic fishing bait methods? Give examples for each method.																																																																																																				

	<ul style="list-style-type: none"> • What is the post-harvest handling activities? <p>2. Reflection on Learning Have the students completed the following sentences? I understand that _____. I realize that _____. I need to learn more about _____.</p>	
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IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		NOTES TO TEACHERS
A. Evaluating Learning	<p>1. Formative Assessment <i>Multiple Choice Quiz:</i> Students will answer the 5-item test about the phases of fish culture and classification of fish according to habitat.</p> <p>1. This refers to the equipment and tools used by fishermen to catch fish or other aquatic organisms. a. Tools and Equipment b. Fishing Gears c. Fishing Supplies d. Fishing Materials</p> <p>2. What are the various instruments, machinery, and devices used in the management, maintenance, and operation of aquaculture facilities. a. Tools and Equipment b. Fishing Gears c. Fishing Supplies d. Fishing Materials</p> <p>3. This involves the separation of harvested products based on various criteria, such as quality, size and shape. a. Sorting and Grading b. Storing c. Harvesting d. Drying</p> <p>4. This method holds a deep-rooted connection to the past. a. Modern</p>	<p>Answers Key:</p> <p>1. b. Fishing Gears 2. a. Tools and Equipment 3. a. Sorting and Grading 4. b. Traditional 5. a. Modern</p>

	b. Traditional c. Sorting d. Grading 5. Techniques that incorporate advanced technology and innovative gear. a. Modern b. Traditional c. Sorting d. Grading			
B. Teacher's Remarks	<i>Note observations on any of the following areas:</i>	Effective Practices	Problems Encountered	The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, the learner engagement and other related stuff. Teachers may also suggest ways to improve the different activities explored.
	strategies explored			
	materials used			
	learner engagement/ interaction			
	others			
C. Teacher's Reflection	<i>Reflection guide or prompt can be on:</i> <ul style="list-style-type: none"> ▪ <u>principles behind the teaching</u> What principles and beliefs informed my lesson? Why did I teach the lesson the way I did? ▪ <u>students</u> What roles did my students play in my lesson? What did my students learn? How did they learn? ▪ <u>ways forward</u> What could I have done differently? What can I explore in the next lesson? 			Teacher's reflection in every lesson conducted/facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.