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DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for Science

Quarter 2
Lesson
8

Lesson Exemplar for Science 4
Quarter 2: Lesson 8 (Week 8)
S.Y. 2024-2025

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SCIENCE (BIOLOGY) / QUARTER 2 / GRADE 4

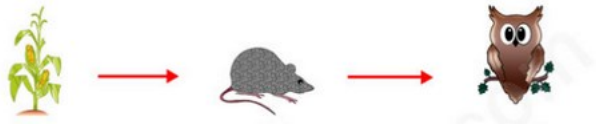
I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	Learners learned that using drawings, tables, and flowcharts is an important skill in learning science concepts and in learning about science processes.
B. Performance Standards	By the end of the Quarter, learners identify that plants and animals have systems whose function is to keep them alive. They observe, describe, and create representations to show how living things interact with their habitat, survive, and reproduce in specific environments. They use flowcharts to show the feeding relationship among different organisms within a given environment
C. Learning Competencies and Objectives	The learners draw a simple food chain using living things from the Philippines and label them as herbivores, carnivores, and omnivores. 1. Draw a food chain and a food web using living things from the Philippines. 2. Label organisms in the food chain as herbivores, carnivores, and omnivores. 3. Identify the relationships among the different trophic levels in a food chain. 4. Trace the flow of energy in an ecosystem 5. Explain the effect of human activities on the balance in a food chain/food web
C. Content	Food Chains
D. Integration	Biological Diversity Values Integration

II. LEARNING RESOURCES
● Dela Cruz, S.B., Lekcharoen, M.L., Guia, G.R., Ortiz, K.A.P., & Salandanan, G.G. (2022). Science You Can Do. Sibs Publishing House, Inc. p. 118. ● Department of Education. (Year). MATATAG Curriculum in Science. DepEd Complex, Meralco Avenue, Pasig City, Philippines. ● I Explore: A Science Textbook 3. Food and Feeding Habits of Animals. Cambridge University Press. Pp. 2-5 ● Mapa A.P., Vengco, L.G. & Potentiano, J.L. (2015). Science for Active Learning 4. Sibs Publishing House, Inc. p. 241. ● Madriaga, E.A., Valdez, M.P., Aquino, M.D., & Apolinario, N.A. (2017). Science Links. Worktext for Scientific and Technological Literacy

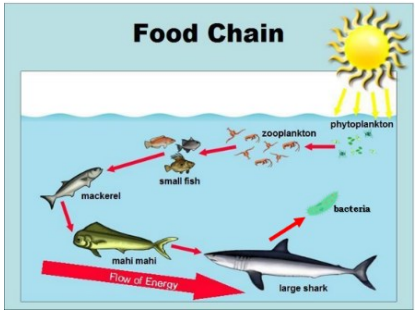
- Khan Academy. Food chains and food webs. https://www.khanacademy.org/science/ap-biology/ecology-ap/energy-flow-through-ecosystems/a/food-chains-food-webs
- Hendrickson, S. and Gurgul A. Trophic Levels Lesson Plan. Science Teaching Methods. https://docs.google.com/document/d/1swzeWit36m3jlTtzXIfajjfuwiXD3sqKidBLJyZ2IRE/edit

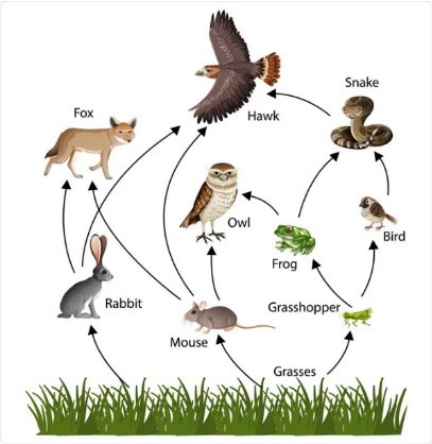
III. TEACHING AND LEARNING PROCEDURE		NOTES TO TEACHERS
A. Activating Prior Knowledge	**Day 1** **1. Short Review** **Cross It Out.** Analyze the five sets of animals to identify which one does not belong to the group. Cross out the word that has different food eaten. 1. dog, pig, bird, tiger 2. pig, goat, horse, cow 3. tiger, lion, cat, snake 4. cat, monkey, duck, deer 5. bear, frog, wolf, lizard	The lesson will start with a review about the classification of animals based on food eaten. The teacher will show five sets of animals then ask the learners to cross out the animal that does not belong to the group.
B. Establishing Lesson Purpose	**2. Lesson Purpose** **Breakfast Meals.** What did you have for breakfast today? What does eating breakfast do for our bodies? Where do you think the energy from the food come from? How does energy coming from the sun being transferred from one organism to another?	1. After that, the teacher will ask the learners about the food they ate for breakfast. And what does the food do for their bodies.

	3. Unlocking Content Area Vocabulary Arrange the scrambled letters to form a meaningful word. Then define each word. 1. CEPRORDU 2. RSEMCONUS 3. PORSEMOCED 4. AICHN OODF 5. DOFO BWE	2. The teacher will now unlock vocabulary words in this topic. The learners will arrange the scrambled letters to form a meaningful word. (This can also be done thru a game) • This activity will let the learners define the words using their prior knowledge. The teacher can also have the option to provide meanings for each word that will help the learners in arranging the letters.
C. Developing and Deepening Understanding	**SUB-TOPIC 1: *Food Chain*** **1.1 Explicitation** **"Jack en Poy".** The learners will play the modified game "Jack en Poy" and here are the mechanics of this game. Gameplay: Students pair up and play "Jack en Poy" against each other. Instead of the traditional "Rock, Paper, Scissors" gestures, pupils will use the assigned organisms for each round. **Example Rounds:** Producers vs. Herbivores Herbivores vs. Carnivores Carnivores vs. Producers Optional: Omnivores introduced for more complexity **Process Questions:** 1. What organism were you assigned during the game, and what role does that organism play in a food chain? 2. How will you relate the game to the concept of interaction between plants and animals?	1.1. The teacher will explain the mechanics of the game. Ask them to find a partner then assign specific organisms from the food chain to each element of "Jack en Poy." Rock (Stone): Producers (Plants), Paper: Herbivores, Scissors: Carnivores, Additional Element (optional): Omnivores. Establish the rules for winning each round based on the food chain relationships. For example, if Herbivores go against Producers, Herbivores win because they consume Producers. Reinforce the concept of energy transfer in a food chain. NOTE: You may do this activity for the whole class or you may select volunteers who will play the game.

	Then the teacher may show on the board the interactions of organisms that were used in the study (she/he may ask the pupils for the example) Ex.  Source: http://eastjackson4thgrade.weebly.com/food-chains.html Then further analyze the interactions of organisms in the food chain. 1. Can you identify the different organisms in the food chain? 2. How would you classify each organism based on its position in the food chain? 3. How are the organisms in the food chain interconnected? 4. What is a food chain? 5. What happens to the energy as it moves through the food chain? Can you explain why energy decreases as it moves up the food chain? 6. What would happen to the food chain if one organism were removed? 7. Why is it important to have a balance in the number of producers, consumers, and decomposers in an ecosystem? **1.2. Worked Example** **A. Two is Better Than One!** Make a table with two columns. On the first column write the plants and on the second column write the animals that can be found in the surrounding area of Monfort Bat Cave. The island of Samal, part of Davao del Norte Province, is off the coast of Mindanao. In this island is the Monfort Bat Cave which is approximately 245 feet (75 meters) long and has five entrances. Bats cover 75 % of its ceilings and walls. An estimated 1.8 million bats, the largest known population of Geoffroy's rousette fruit bats in the world, are overloading Monfort Bat Cave on the Philippines' Samal Island. Geoffroy's rousette fruit bats feed on fruits and nectar. Their role as pollinators and seed dispersers is essential in sustaining Philippine forests, including such important commercial fruits as durian. Each bat consumes 1 ½ to 3 times its body weight nightly in fruit and nectar. This colony could consume 550 tons (500, 000 kg)of nectar from durian and other trees, pollinating an incredible number of flowers.	1.2. Worked Example Before the start of this activity, the teacher will distribute to the pupils a handout copy of the article about Monfort Bat Cave. They will read and understand what is stated in the handout. Then they will be divided into three groups and each will have a task to accomplish. A. Two is Better Than One! B. The Kingdom! C. Construction Site!

	Worldwide, cave-dwelling bats are in alarming decline due to human disturbance and destruction of their cave roosts. In some areas, including Samal Island, bats are captured and eaten by humans. Colonies like the one in Monfort Bat Cave are now rare and in urgent need of protection. Their loss would endanger the health of forests and human economies. The bat's colony should be able to survive natural predators-crows, rats, 10-ft (3 meters) phytons and occasional monitor lizards- just as bat populations do elsewhere. Untamed dogs and cats, however, also seem to do bad hunting at Monfort Bat Cave Source: Bat Conservation International, www.batcon.org **B. The Kingdom!** Classify the animals living in the Monfort Bat Cave based on their feeding habits. Use a table in sorting the animals. **C. Construction Site!** Create a simple food chain with at least three organisms representing the producer, 1st order consumer and 2nd order consumer. After the activity, ask the following process questions: 1. What is the significance of the Monfort Bat Cave on Samal Island? 2. How does the feeding behavior of Geoffroy's rousette fruit bats contribute to the local food chain in the Monfort Bat Cave? 3. Why are the population of bats declining? How do this affect the natural balance of ecosystem? 4. Why is it crucial to consider the preservation of bat colonies for the overall health and sustainability of the ecosystem's food chain? **3. Lesson Activity** **3.1. Linking Life: From Plants to Predators!** A. Construct a food chain using the following organisms: Eagle snake frog Bird grass locust	**3. Lesson Activity** The teacher will now let the pupils answer their worksheets. 3.1. Linking Life

	B. Identify which organisms are the: 1. producers 2. primary consumer 3. secondary consumer 4. tertiary consumer 5. quaternary consumer C. How many links are there in the food chain you have constructed? **3.2. Who Eats Whom in the Deep Blue Sea?** Describe the chain below by answering the given questions.  1. What are the different organisms shown in the food chain? 2. Which are the producers, consumers (Primary, secondary, tertiary, quaternary) and decomposers in the food chain? 3. Which organism is at the top of the food chain? Why do you think so? 4. Trace the path of energy from the sun to a top predator in the food chain. 5. How might human activities impact the ocean food chain? **3.3. Circle of Life: Animals on a Feeding Spree!** Create your food chain using pictures of animals. Paste it on a paper plate. Illustrate how energy flows in the food chain by showing the correct position of the arrowhead where it is pointing.  	3.2. Who Eats Whom in the Deep Blue Sea? (You may introduce first what are phytoplankton and zooplankton. You may also change the names of the organisms based on their local names) 3.3. Circle of Life: Animals on a Feeding Spree! This activity can be done at school or at home. If at school, ask the pupils to bring the needed materials: Paper plate, pictures of plants and animals for the food chain, ballpen or pentel pen, scissors, glue or paste. Once they finished this activity ask them to present their output to the class. If this will be done at home, tell them to make a vlog in doing this activity.

	Day 2 **SUB-TOPIC 2: *Food Web*** **1. Explicitation** Analyze the given picture. Trace how many food chains are interconnected to each other.  **Process Questions:** 1. What are the different organisms you see in the image? Can you group them based on what they eat (producers, consumers, decomposers)? How many producers? herbivores? carnivores? 2. Following the arrows, trace the path of energy from the sun to a top predator. What happens to the energy at each level? 3. Decomposers are not explicitly shown in the image, but they play a crucial role. Why are they important for the food web and the overall ecosystem? 4. Identify the food chains that compose the food web in the figure. 5. What do you think will happen if there is an excessive hunting of snakes? 6. What is the difference between a food chain and a food web? **2. Worked Example**	**Food Web:** The lesson will start by showing a picture of a food web then the teacher will ask process questions to introduce the lesson about food web.

	2.1. Pass the Yarn, Pass the Bite! The class will pass out a sticker name tag and each learner will pick one name of an animal. Then they will form a food chain using a yarn. Then have them throw the yarn ball to a consumer of other groups that would eat it. **Preparation:** 1. Label each sticker with a different animal name representing different trophic levels (herbivores, carnivores, omnivores). Include some decomposers if desired. 2. Divide the yarn into several pieces of varying lengths, representing different energy levels transferred in the food chain. 3. Choose a starting point in your space and mark it as the "sun." **Activity:** 1. **Animal Selection:** Have each student pick a sticker and wear it prominently. 2. **Building the Web:** Starting at the "sun," hand the ball of yarn to a student with a herbivore sticker. This student holds onto the yarn, representing the energy received from the sun. 3. **Passing the Bite:** Ask the herbivore student to identify a carnivore or omnivore that would eat them. That student then holds the yarn from the herbivore, representing the transfer of energy. Continue in this way, with students passing the yarn according to who would eat them in the real food chain. You can use the different colored yarn pieces to represent different energy levels transferred at each trophic level. 4. **Food Chain Loops:** If the food web reaches a dead end (e.g., top predator with no further consumers), have that student throw the yarn ball back to a lower trophic level, creating a loop in the web. Explain how decomposers can break down dead organisms and return nutrients to the system.	(this activity needs an open space so you may ask the pupils to put their chairs at the sides of the room or you may do this activity outside the room)

	Once the web is complete, gather everyone and discuss the activity. Ask the following questions: 1. How does energy flow through the food chain? 2. What happens to the energy at each level? 3. How do the various organisms in the food web depend on each other for survival? What happens if one species is removed from the food web? 4. Imagine a new predator is introduced to your food web. How might this disrupt the existing relationships and energy flow? Can the other organisms adapt to this change? 5. How might human activities like pollution or habitat destruction impact the organisms involved? **2.2. Teen Titans, Assemble!** Reconstruct a disrupted food web by analyzing the relationships between different organisms in an ecosystem. **Materials:** 1. Printed cards with images of organisms (plants, herbivores, carnivores, decomposers) 2. Large sheet of paper or cardboard 3. Yarns or strings (optional) 4. Markers 5. Glue **Preparation:** 1. **Gather information:** Research the different types of organisms found in a forest ecosystem and their roles in the food web. Prepare pictures, cards, or descriptions of various species. 2. **Create the chaos:** Scatter the organism pictures or cards randomly on the paper or whiteboard. You can even hide some within the classroom for an extra challenge.	**2.2. Teen Titans, Assemble!** The teacher may begin by presenting a scenario "Imagine you're exploring the magical Everwood forest when suddenly, a disturbance occurs! Animals are scattered, plants are uprooted, and everything is chaotic. As the Teen Titans, it's up to you to use your knowledge and teamwork to reconstruct the food web and restore harmony to the Everwood!

	3. **Prepare clues (optional):** Create clue cards with hints about specific predator-prey relationships within the forest ecosystem. These can be riddles, descriptions, or even drawings. **Activity:** 1. **Assemble the Titans:** Divide students into groups, each representing a member of the Teen Titans (Robin, Cyborg, Starfire, Raven, Beast Boy). 2. **Briefing:** Explain the scenario and the importance of restoring the forest's food web. Briefly discuss the different types of organisms and their roles (producers, herbivores, carnivores, decomposers). 3. **Investigation:** Each team starts by analyzing the scattered organisms. Encourage them to discuss, research, and strategize how to connect the different species based on their known food relationships. 4. **Reconstruction:** Teams start building the food web by placing the organisms on the paper or board and connecting them with yarn or lines, representing the energy flow. 5. **Clue Time (optional):** If using clues, distribute them strategically to different teams. Teams can use these clues to solve specific connections within the food web. 6. **Presentation:** Once their food web is complete, each team presents their work to the class, explaining their reasoning and thought process. Discuss the reconstructed food web as a class by asking the following questions: 1. How did you determine the role of each organism in the disrupted food web? 2. How did changes or disruptions in one part of the food web affect other organisms? 3. Why do you think it's important to maintain a balanced food web in an ecosystem?	

4. Which organisms do you think are the most crucial for the stability of the food web, and why?
5. Can you give other examples that could disrupt the food web? How might these disruptions impact the organisms in the ecosystem?

3. Lesson Activity

3.1. Food Frenzy
Research a specific ecosystem (e.g., a forest, grassland, or ocean) and create a detailed food web diagram using paper or digital tools like drawing software.

Have students research a specific ecosystem (e.g., a forest, grassland, or ocean) and create a detailed food web diagram using paper or digital tools like drawing software.

Encourage them to include as many organisms as possible and accurately depict the flow of energy between them.

3.2. Symphonies of Food Webs and Environmental Woes
In a group of three, create a song or poem about food webs and how environmental problems like pollution and climate change affect them.

After the presentation of all groups, answer the questions below:
During the presentations, did you notice any actions or solutions suggested for helping to protect all organisms from environmental harm? What are some ideas you remember?

Have pupils create a song or poem summarizing their learning about food webs and how environmental issues affect them. Encourage them to brainstorm ideas and key concepts they want to include in their song or poem. This may include the roles of producers, consumers, and decomposers in food webs.

Allow the pupils to perform their songs or recite their poems in front of the class or they can record their performances or readings and share them digitally with the class or on a class website. (the teacher may choose which one will best suited to her/his class).

Criteria	Excellent (4)	Good (3)	Fair (2)	Needs Improvement (1)
Accuracy of Food Web Diagram	All organisms accurately represented with correct trophic levels and energy flow clearly depicted.	Most organisms accurately represented with mostly correct trophic levels and energy flow depicted.	Some organisms inaccurately represented or trophic levels unclear. Energy flow partially depicted.	Many organisms inaccurately represented or trophic levels unclear. Energy flow poorly depicted.
Complexity and Detail	Diagram includes a wide variety of organisms and demonstrates a thorough understanding of the ecosystem's food web.	Diagram includes several organisms and demonstrates a good understanding of the ecosystem's food web.	Diagram includes a limited number of organisms and demonstrates a basic understanding of the ecosystem's food web.	Diagram includes few organisms and demonstrates a minimal understanding of the ecosystem's food web.
Creativity and Presentation	Creativity is evident in the presentation of the food web diagram, whether it's through artistic elements, annotations, or additional information.	Some creativity is evident in the presentation of the food web diagram, but it could be further enhanced.	Limited creativity is evident in the presentation of the food web diagram.	Little to no creativity is evident in the presentation of the food web diagram.

	Day 3 **SUB-TOPIC 3: Energy Levels** **1. Explicitation** **Trophic Tower** **Materials Needed:** Markers or pens Large poster paper or whiteboard Images or illustrations of organisms representing different trophic levels (producers, primary consumers, secondary consumers, etc.) Tape or adhesive putty Procedure: Each group will arrange their index cards on a large poster paper or whiteboard to create a "Trophic Tower." Start with the producers at the bottom of the tower and then add the primary consumers, secondary consumers, and so on, stacking the index cards vertically to represent the flow of energy. **Process Questions:** 1. How did you decide which organisms to include in your Trophic Tower? 2. Can you explain the significance of each trophic level in the ecosystem represented by your tower? How might changes in one trophic level affect the rest of the ecosystem represented by your Trophic Tower? **2. Worked Example** **2.1. Philippine Forest Escapade** *Scenario:* In the Philippine Forest, a Philippine eagle swoops down to catch a Philippine tarsier, while a reticulated python lurks nearby, eyeing a Philippine deer grazing on leaves, and a pitcher plant awaits its insect prey.	The lesson will start with a "Who's for Dinner? Challenge. See the worksheet for the instruction. The objective of this activity is to introduce to the students the concept of energy levels (trophic levels) in ecosystems and to help them understand how energy flows through different levels of a food chain. The teacher will divide the class into small groups and provide each group with a large poster paper or whiteboard and images or illustrations of organisms representing different trophic or index cards. (Note: The teacher may prepare a printed images of organisms or ask the pupils to draw or write the name of organisms that represent each trophic level. Give them 10 minutes to finish the activity. Afterwards, ask the pupils to explain their towers, including the types of organisms represented at each trophic level and the flow of energy through the tower. Encourage them to reflect on why energy decreases as it moves up trophic levels and discuss the concept of energy transfer efficiency. The teacher will present a scenario about some of the organisms in the Philippine rainforest. Then she/he will ask the pupils to answer the given questions on their notebook

	1. What are the organisms mentioned in the scenario. Make a trophic tower then classify each organism into its respective trophic level (producer, primary consumer, secondary consumer, etc.). 2. Describe the flow of energy through the ecosystem based on the scenario. Explain how energy is transferred between trophic levels. Predict how much energy is transferred from one trophic level to the next. 3. Imagine if there was a decrease in the population of Philippine deer due to habitat loss. How would this affect the energy flow in the ecosystem? **Follow-up questions:** 1. Why do you think only some of the energy is transferred from one animal to another? What happens to the rest? 2. Why is it important for animals to share the energy they get from food? **3. Lesson Activity** **3.1. Who Gets the Leftovers?** Read the following scenarios and answer the questions about energy transfer. **Scenario 1:** A plant captures 100 units of energy from the sun through photosynthesis. A grasshopper eats the plant and gains 80 units of energy. What happens to the remaining 20 units of energy? **Scenario 2:** A snake eats a lizard that has 1000 units of energy. The snake uses 60 units of its energy for breathing, moving, and digesting its food. How much energy does the snake have left for other activities or growth? **3.2. Be a Forest Hero!** Create an infographic or multimedia presentation to raise awareness about the importance of maintaining balance and biodiversity in the Philippine Forest ecosystem. Highlight the potential impacts of human	After that, the teacher may check right away the answers of the pupils to the given questions. She may give emphasis to question number 2 about the 10% rule, that on average only 10 percent of energy available at one trophic level is passed on to the next. In addition to that, teacher may also add these questions: The teacher will distribute the worksheets containing these two activities For this computation, the pupils should have understood the energy flow on each trophic level in the worked example. The teacher may give the pupils an option whether they want to create an infographic or a multimedia presentation. Their output will

	activities and actions individuals can take to support conservation efforts. **Scoring:** • **Content Relevance-** Content is highly relevant, addressing the importance of maintaining balance and biodiversity in the Philippine Forest ecosystem with depth and clarity (5pts.). • **Information Accuracy**- All information presented is accurate, supported by credible sources, and relevant to the topic (5pts.). • **Creativity and Visual Appeal**- Presentation is highly creative and visually appealing, effectively using graphics, multimedia elements, and design principles to engage the audience (5pts.). • **Clarity and Organization**- Content is well-organized, with a clear structure that effectively communicates key points and maintains audience engagement (5pts.). • **Depth of Analysis**- Presentation demonstrates a deep understanding of the topic, providing insightful analysis of the potential impacts of human activities and actions individuals can take to support conservation efforts (5pts.). • **Effectiveness of Persuasion**- Presentation effectively persuades the audience of the importance of maintaining balance and biodiversity in the Philippine forest ecosystem, compelling them to take action to support conservation efforts (5pts.) • **Overall Presentation Quality**- Presentation is of high quality, demonstrating excellence in content, design, and delivery (5pts.). **TOTAL POINTS**: 35 POINTS	raise awareness about the importance of maintaining balance and biodiversity in the Philippine Forest ecosystem. They will also highlight the potential impacts of human activities and actions individuals can take to support conservation efforts.

E. Making Generalizations

Day 4

4. Learners' Takeaways

A. Rate your understanding

Check one of the boxes describing how the lesson helped you attain the focus points intended for the lesson.

How much did this lesson help you....	Fair (5 points)	Better (8 points)	Best (10 points)
1. Draw a food chain and a food web using living things from the Philippines.			
2. Label organisms in the food chain as herbivores, carnivores, and omnivores.			
3. Identify the relationships among the different trophic levels in a food chain.			
4. Trace the flow of energy in an ecosystem			
5. Explain the effect of human activities on the balance in a food chain/food web			

B. 3-2-1

Three

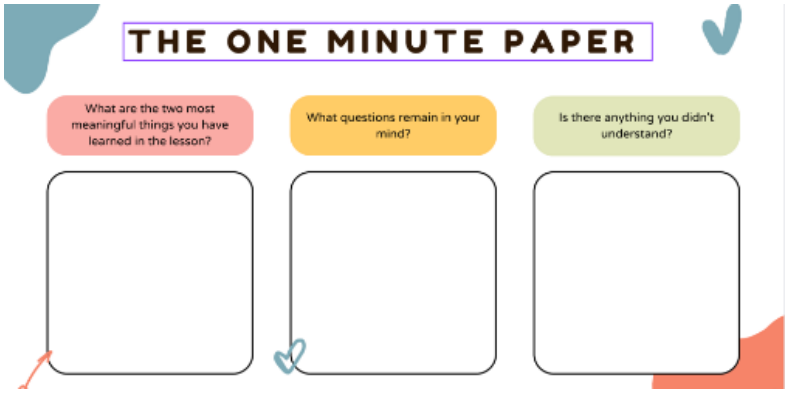
Record three things you learned from the lesson.

Two

Record two things that you found interesting and that you'd like to learn more about.

3. One

Record one question you still have about the topic.

	5. Reflection on Learning **A. One Minute Paper:** Using the graphic organizer, reflect on your learning by creating a one-minute paper by answering the questions.  **B. Exit Slips.** Before you leave the class, write down what you've learned on a sticky note.	

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		**NOTES TO TEACHERS**
A. Evaluating Learning	**1. Formative Assessment** A. Multiple Choice. Read carefully the questions and choose the letter of the correct answer **PART A:** 1. Which organism in the food chain below is a producer? Rice → Mouse → Snake → Eagle a. Snake b. Mouse	**ANSWER KEY: (PART A)** 1. C 2. B 3. D 4. C 5. C

c. Rice
d. Eagle

2. Which statement is true about the transfer of energy in the trophic levels?
a. If you eat organisms that feed on plants, you will have the highest energy in the trophic levels.
b. Only 10% of energy in an organism is transferred to the next trophic level.
c. The amount of energy transferred increases as it goes up the trophic level.
d. The transfer of energy from one trophic level to the next is very efficient.

3. Which of the following is a correct food chain (Producer to Consumers)?
a. grass → snake → farm mouse
b. snake → grass → farm mouse
c. farm mouse → snake → grass
d. grass → caterpillar → bird

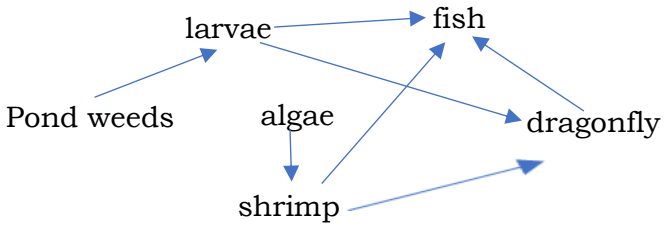
4. What is the other name for a primary consumer?
a. autotroph
b. omnivore
c. herbivore
d. carnivore

5. Where can you find the predator in the energy pyramid?
a. third level
b. middle
c. apex
d. base

6-7. Create two food chains from the following organisms.

Mouse	Duck	caterpillar	rice plant	human
Snake	freshwater	clam	hawk	chicken

For questions 9-10, refer to the food web below.



PART B:

11. How many producers are there in the food web?
a. 1 b. 2 c. 3 d. 4

12. Which organism in the food web consumes greatest number of organisms?
a. dragonfly b. fish c. shrimp d. larvae

13. Which trophic level has the greatest amount of energy?
a. pond weeds c. dragonfly
b. larvae d. fish

PART C:
B. Short Essay
Analyze the impact of urbanization (e.g. construction of houses, buildings, shopping centers, and roads) on the balance of food chains and food webs in ecosystems, with specific reference to the Philippines.

ANSWER KEY: (PART A)

11. A

12. B

13. A

B. Teacher's Remarks	*Note observations on any of the following areas:*	**Effective Practices**	**Problems Encountered**
	strategies explored	This section should capture what strategies have been	In this part, you would document any issues or challenges

		successfully employed during the observed activities. It could include innovative teaching techniques, group work, or the use of technology that improved the learning process.	encountered during the lesson. These might include difficulties in grasping certain concepts, distractions, or obstacles to active engagement.	
	materials used	Note what teaching materials or resources were particularly effective in enhancing the learning experience. This could involve textbooks, multimedia presentations, or hands-on materials	Document any problems with materials or resources that hindered the learning process. For example, outdated textbooks, technical issues with digital resources, or a lack of essential materials	
	learner engagement/ interaction	Observe how well the students were engaged with the lesson. Effective practices might include students participating actively in discussions, asking questions, or demonstrating enthusiasm for the topic	Mention any instances where learner engagement was lacking, such as disinterest, distractions, or difficulty in understanding the subject matter.	
	others	This section is for any notable positive practices that don't fit within the categories above. It could include classroom management techniques, the use of assessment tools, or successful communication with students	Document any miscellaneous issues or problems that don't fall under the previous categories. These could encompass behavioral problems, communication challenges, or other noteworthy concerns.	