4

DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for Science

Quarter 1
Week
8

DepED MATATAG
BAGONG PILIPINAS
ONE NCR STRONGER TOGETHER

Lesson Exemplar for Science Grade 4
Quarter 1: Week 8

This material is intended exclusively for the use of teachers in the implementation of the MATATAG K to 10 Curriculum. It aims to assist in delivering the curriculum content, standards, and lesson competencies.

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MATATAG **K to 10 Curriculum** **Weekly Lesson Log**	School		Grade Level	4
	Name of Teacher		Learning Area	Science
	Teaching Dates and Time		Quarter	I

	DAY 1	DAY 2	DAY 3	DAY 4
I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES				
A. *Content Standards*	The learners shall learn that communication skills and open-mindedness are needed in solving environmental issues			
B. *Performance Standards*	By the end of the Quarter, learners describe chemical properties of materials and the changes they undergo. They demonstrate an understanding that science processes can solve everyday problems and use creativity and determination to provide examples. They exhibit objectivity and open-mindedness in gathering information related to environmental issues and concerns in the community.			
C. *Learning Competencies*	Apply science process skills and attitudes in conducting a guided survey about environmental issues and concerns including grouping and classifying, communicating, and open-mindedness.	Apply science process skills and attitudes in conducting a guided survey about environmental issues and concerns including grouping and classifying, communicating, and open-mindedness.	Apply science process skills and attitudes in conducting a guided survey about environmental issues and concerns including grouping and classifying, communicating, and open-mindedness.	Apply science process skills and attitudes in conducting a guided survey about environmental issues and concerns including grouping and classifying, communicating, and open-mindedness.
D. *Learning Objectives*	At the end of the lesson, the learners should be able to: 1. present the class profile based on the survey results. 2.analyze data from survey results; and 3. identify priority environmental problems to be addressed.	At the end of the lesson, the learners should be able to: 1.list the properties of materials involved in the identified problem 2.search how the properties of the material can be used to solve the problem; and 3.enumerate the materials needed in addressing the priority problem	At the end of the lesson, the learners should be able to: 1.identify possible solution to the problem; and 2.present the possible solution to the class for peer evaluation.	At the end of the lesson, the learners should be able to write the final plan for the solution of the problem.

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E. Instructional Design framework feature (s)	Ideational (application of knowledge) Inclusive(student-centered), Integrative (Interdisciplinary Connections) Collaboration (interaction among learners), Engage	Integrative (problem solving) Ideational (Deep learning) Explore (Active investigation Collaboration (Group Projects/Cooperative Problem Solving	Connection (linking to practical applications) Experience (Practical Scenarios	Creativity (encouraging original thinking) Innovative (creativity & originality)
F. 21st Century Skills	Explore (gathering information) Information, Media and Technology Skills – Visual literacy Learning Innovation Skills – critical thinking & problem solving Communication skills – teamwork and collaboration	Information, Media and Technology Skills – Visual literacy Learning Innovation Skills – critical thinking & problem solving Communication skills – teamwork and collaboration	Learning Innovation Skills – critical thinking & problem solving Communication skills – teamwork and collaboration	Learning Innovation Skills – critical thinking & problem solving Communication skills – teamwork and collaboration Life and career skills – informed decision making, adaptive leadership
II. CONTENT	Gathering Scientific Information	Gathering Scientific Information	Gathering Scientific Information	Gathering Scientific Information
III. LEARNING RESOURCES				
A. References				
B. Other Learning Resources	Medalia. (2024). 5 examples of how to present survey results to stakeholders. *CheckMarket*. Retrieved from https://www.checkmarket.com/blog/5-examples-of-how-to-present-	Medalia. (2024). 5 examples of how to present survey results to stakeholders. *CheckMarket*. Retrieved from https://www.checkmarket.com/blog/5-examples-of-how-to-present-survey-results-to-stakeholders/	Marsh, J. (2024, February 23). Environmental problems in schools and how to address them. *Environment*. Retrieved from https://environment.co/environmental-problems-	

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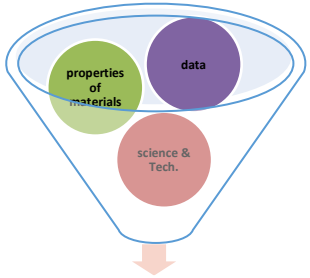
<table>
<tr><td></td><td>survey-results-to-stakeholders/</td><td></td><td>in-schools-and-how-to-address-them/</td><td></td></tr>
<tr><td colspan="5">IV. TEACHING AND LEARNING PROCEDURES</td></tr>
<tr><td colspan="5">Before/Pre-Lesson Proper</td></tr>
<tr><td>Activating Prior Knowledge</td><td>The teacher will ask the learners:

Is there anything that you're curious about?

How will you be able to obtain that information?

After gathering responses, the teacher will mention that such information can be determined by analyzing data from surveys.</td><td>The teacher will ask learners to interpret the illustration. The teacher will process the interpretation.
 

solution

The teacher will process the interpretation of the students on the illustration shown in the previous section and will use this as a springboard to introduce the application of science and technology (particularly the properties of materials) to find solutions to the identified priority problem.</td><td>The teacher will present the groupings based on the agreed priority problem and the data.
<table><tr><td>Group</td><td>Priority Problem</td><td>Properties of Materials Involved</td></tr><tr><td>1</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr></table></td><td>With the activities the learners have accomplished, they are now ready to write the final plan.

Posted on the wall are words that represent the parts of the final paper. The teacher will ask the learners what they think should be the parts of the final plan.

They will get the words that they thought of being part of the final paper.</td></tr>
<tr><td>Lesson Purpose/Intention</td><td>The teacher will present the class profile based on the survey results. Number of Learners in the class = 50

The teacher may present the data in fraction or in pictograph</td><td>The teacher will focus on the lesson which is to identify the properties of materials involved in the identified environmental problems, search how these properties can be used to solve the problem, and enumerate the materials needed in</td><td>The teacher will ask:
How do you think we can use your outputs (table) to come up with a solution to the identified priority problems?

The teacher will process the answers.</td><td>The teacher will ask what the learners would like to include as they write the final plan and process the learners' answers. The teacher will present or mention the parts of the final plan.</td></tr>
</table>

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	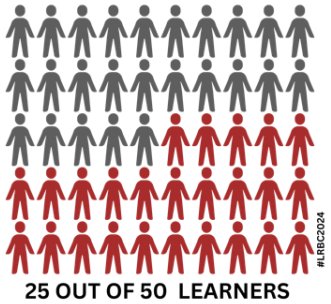 25 = ½ of the class have waste segregation problems. *Note: For the vertical articulation of the curriculum, it is suggested that the teacher will use fraction for the profiling of data*  The teacher will discuss the meaning of the icon, emphasizing the	addressing the priority environmental problem. The teacher will also introduce Alex, the character they come across as they read the day's story. The teacher will mention words the learners need to understand for better understanding of the story.		

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<table>
<tr>
<td></td>
<td>importance of analyzing data.

The teacher will process the students' interpretation of the illustration shown in the previous section and will use this as a springboard to introduce the application of science and technology (particularly the properties of materials) to find solutions to the identified priority.

The teacher will introduce Lily as the character whom the learners will meet in the reading selection. Before reading the story, the teacher will show words that they will encounter in the story.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lesson Language Practice</td>
<td>Strategy: Show Me Board
The learner will be asked to write on a show board the word being referred to in the sentence

Analyze
Data
Survey
Information</td>
<td>Strategy: Word Match
Match items in column A with that of Column B.

<table><tr><th>A</th><th>B</th></tr><tr><td>chemicals
C</td><td>a. contamination</td></tr><tr><td>brainstorm
D</td><td>b. broad-minded</td></tr></table></td>
<td>The teacher can post words associated with environmental problems and prepare pieces of paper containing words associated with the solutions to those problems. The teacher can ask the students to place (or paste) the pieces of paper around the</td>
<td>Match the items in Column A with that in column B.

<table><tr><th>A</th><th>B</th></tr><tr><td>B1. introduction</td><td>a. issues and concerns to be addressed</td></tr></table></td>
</tr>
</table>

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	1. It is like little pieces of information that scientists collect to learn about things and solve problems. (data) 2. It is what we get when we put together all those little pieces of data to understand something or answer a question. (information) 3. It means looking closely at all the information we must figure out patterns, find answers, or make decisions. (analyze) 4. It is like a special questionnaire that asks people questions to gather information and understand what they like or think about something. (survey) They noticed that the once-clear river now looked murky, and the fish seemed to struggle	pollution **A** c. substances open-mindedness **B** d. ideation	environmental problem to which they are related to.	**A**2. problem pollution **E**3. Proposed solution **C**4. materials **D**5. procedure	b. background information c. resources needed d. step by step method e. key in solving problem
During/Lesson Proper					

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Reading the Key Idea/ Stem	The teacher will ask the learners to read the story.  There was a park loved by all the children in the neighborhood. However, lately, they noticed that the park wasn't as green and vibrant as it used to be. The trees looked dull, and there was too much litter scattered around. One day, a group of kids gathered in the park to discuss how they could improve it. The kids knew they needed to take action, but they weren't sure where to start. That's when Lily had an idea. "I think we should ask everyone in the neighborhood what they think we should do to	The teacher will ask the learners to read the story.  Alex loves spending time outdoors, especially exploring the nearby forest with their friends. One day, while playing near a stream, Alex notices something strange. The water looks dirty, and there are some unusual bubbles floating on the surface. Curious and a little concerned, Alex chooses to investigate. They remember learning in science class about how certain chemicals can harm the environment, like when trash or pollution gets into the water. So, Alex uses their knowledge of chemical properties to understand the problem and find a solution.	The teacher will ask the learners to read the story.  In a busy City along the river, there lived a group of friends: Christy, Ben, and Max. They loved playing in the forest, swimming in the river, and watching birds chirp happily in the trees. But one day, they noticed something troubling. The river that was once so clear now looked murky, and the fish that used to swim freely seemed to struggle. Worried about their beloved river, Christy, Ben, and Max decided to investigate. They talked to the elders in their community, who explained that pollution from factories and households upstream was	The teacher will present a sample final plan in the class. The group writes the final plan using the following format: I. Introduction: *This part provides background knowledge about the environmental problem and introduces the properties of materials that can be used or applied to solve it.* II. Problem: *State environmental problem/s observed in the community.* III. Proposed Solution: *Discussion of the proposed solution and how the knowledge of the properties of materials can help solve the problem.* IV. Materials *Enumerate the materials needed to solve the environmental problem/s, including their uses and sources.* V. Procedure *This part describes the step-by-step procedure for solving the environmental problem/s. It can be presented through numbered sentences,*

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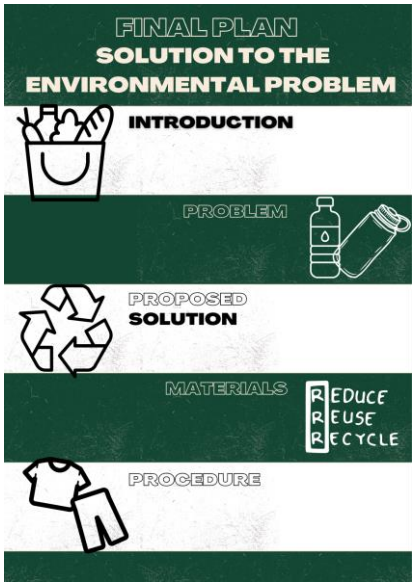
	improve the park!" she exclaimed. The other kids nodded in agreement. They decided to create a survey to ask everyone in the neighborhood their opinions. With colorful markers and big sheets of paper, they crafted simple questions like, "What would make the park more fun for you?" and "How can we keep the park clean?" Armed with their surveys, the kids set out into the neighborhood, knocking on doors and talking to people of all ages. They explained their goal and asked everyone to fill out the survey. After a few days of hard work, the kids collected all the surveys and gathered in the park to analyze the results. They discovered that most people wanted to plant more flowers and trees, set up recycling bins, and organize community clean-up events. Excited by the feedback, the kids came up with a plan. They formed a	First, Alex gathers their friends and shares their observations. They explain their observations and why it might be problematic for the plants and animals in the forest. Alex motivates everyone to share their ideas about what could be causing the pollution. Together, they brainstorm different possibilities. One friend suggests that maybe someone dumped chemicals into the stream by accident, while another thinks it could be natural pollution from nearby factories. Alex and their friends listen carefully to everyone's ideas and encourage them to keep an open mind. They also test their ideas through an experiment Next, Alex suggests they collect some water samples to test for different chemicals. They remember learning about simple tests they can do to identify substances, like using pH paper to test acidity. Alex and their friends work together to collect samples and perform tests, recording their findings carefully.	flowing into the river, harming the plants and animals that called it home. Instead of feeling bad, the friends realized that they needed to do something. They brainstormed ideas on how to clean up the river and protect it for the future. Christy suggested organizing a clean-up day, Ben proposed building a filter system, and Max thought of planting more trees along the river. Ben proposed building a filter system to catch pollutants before they entered the river. Max thought of planting more trees along the river to absorb harmful substances. Excited about their plans, the friends shared their ideas with the community. To their delight, everyone wanted to help! Families brought gloves and garbage bags for the clean-up day, and others volunteered to donate materials for the filter system. Some even offered to plant appropriate trees along the riverbanks.	*illustrations, diagrams, or any other printed form of communication.* 

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	"Park Improvement Team" and got to work. They planted flowers and saplings, painted colorful recycling bins, and organized a big clean-up day where everyone pitched in to pick up litter. As the days went by, the park transformed into a vibrant green oasis once again. Families picnicked under the shade of newly planted trees, and children laughed and played on the clean, litter-free grass. Thanks to Lily and her friends' initiative and the power of their survey, the once-neglected park became a beautiful, thriving space for the whole community to enjoy.	After analyzing the results, they discover that the water in the stream is indeed contaminated with harmful chemicals, likely from a nearby factory. But instead of feeling discouraged, Alex and their friends feel empowered. They realize that they can make a difference by taking action to protect the environment. They decide to write a letter to the local authorities, explaining their findings and urging action to clean up the pollution. They also organize a community clean-up day to help remove trash and pollution from the forest. Through their teamwork, open-mindedness, and communication skills, Alex and their friends demonstrate how young people can use their knowledge and passion to solve environmental problems and make the world a better place for everyone	As the days passed, the city worked tirelessly together. They picked up litter, built the filter system, and planted trees with care. Slowly but surely, the river began to heal. The water cleared up, and soon the fish swam freely. The friends couldn't have been happier with the results of their collaboration. They realized that by staying open-minded and working together, they could overcome even the biggest challenges. Their city became a shining example of how communities can come together to protect the environment and make the world a better place for everyone, including the birds, fish, and all the creatures that call it home. And from that day on, Christy, Ben, and Max knew that with science, teamwork, and determination, great things were possible.	

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Developing Understanding of the Key Idea/ Stem	**Ask the learners:** 1. What are the environmental problems observed by Lily? *Lily noticed that the trees looked dull and there was too much litter scattered around.* 2. How did Lily solve the problem? *Lily prepared a survey and together with some kids went all over the community and asked households to answer the survey.* 3. What information did the kids get from the survey questionnaire? *They discovered that most people wanted to plant more flowers and trees, set up recycling bins, and organize community clean-up events.* 4. What are the actions they implemented based on the survey? *They formed a "Park Improvement Team" and got to work. They planted flowers and saplings, painted colorful recycling*	**Ask the learners:** 1. What are the traits possessed by Alex and friends which make them discover the problem? *The traits Alex and friends possess are being observant and curious.* 2. How did Alex apply open-mindedness in addressing environmental problems? *Alex listens carefully to everyone's ideas and encourages them to keep an open mind, they also test their ideas through an experiment. They did not jump to conclusions immediately.* 3. How did Alex and friends communicate their findings about the environmental issue they discovered? *They decide to write a letter to the local authorities, explaining their findings and urging them to take action to clean up the pollution. They also organize a community clean-up day to help remove trash and pollution from the forest.*	**Ask the learners:** 1. What worried Christy, Ben, and Max? *Christy, Ben, and Max noticed something distressing about their environment, the river that was once so clear now looked murky, and the fish that used to swim freely seemed to struggle.* 2. How did Christy, Ben, and Max manage the destressing observations about their environment? *Instead of feeling bad, the friends felt that they needed to do something. They brainstormed ideas on how to clean up the river and protect it for the future. Christy suggested organizing a clean-up day where everyone in the city could come together to pick up trash along the riverbanks. Ben proposed building a filter system Max suggested planting more trees along the river to absorb harmful substances..."*	The teacher will go around the classroom to assist the learners while they are writing their final plan.

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	bins, and organized a big clean-up day where everyone pitched in to pick up litter. 5. Have you experienced answering a survey? Tell a story about it. *Some learners will answer no. Some will answer yes and try to connect the census during child mapping.*		3. What did they do to solve the environmental problems? *They shared their ideas with the community. To their delight, everyone wanted to help! Families brought gloves and garbage bags for the clean-up day, while others volunteered to donate materials for the filter system. Some even offered to plant appropriate trees along the riverbanks.* *The teacher will process the answer leading to the learners' environmental problem/s and possible solutions.* The teacher will guide each group to arrive at the possible solution to the priority environmental issue. Each group will be given a 5-minute consultation. Group No | Problem | Possible Solution 1 2 3	

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<tr><td></td><td></td><td></td><td><table><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr></table></td><td></td></tr>
<tr><td>Deepening Understanding of the Key Idea/ Stem</td><td>The teacher will guide learners in discussing the class profile based on the survey results, analyzing the data from these results, and prioritizing the problem to be addressed</td><td>The teacher will ask the learners to go with their respective groupings and choose the priority problem they decided to focus on. Each group will accomplish the table below.<table><tr><td>Group</td><td>Priority Problem</td><td>Properties of Materials Involved</td></tr><tr><td>1</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr></table></td><td>After identifying the priority environmental problem, the learners will work in groups to determine the materials they need, their uses, and sources, so they can connect these to the problem and their proposed solution.
The teacher will ask the learners to identify the materials needed for their proposed solution, the actual use of those materials, and the source of those materials.<table><tr><td>Materials needed</td><td>Uses</td><td>Sources</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table></td><td>The teacher will go around the classroom to assist each group of learners while they write their final plan</td></tr>
</table>

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After/Post-Lesson Proper				
Making Generalizations and Abstractions	**Ask the learners:** How to determine the priority problem? **Possible answers:** *Priority problems can be identified through the analysis data obtained through survey.*	**The learners complete the statement below.** Knowing the importance of the properties of materials will help us _____. **Possible answers:** *Understanding the properties of materials can help us solve environmental problems.*	The proposed solution can further be enhanced through discussions and exchanging of ideas with the class	To communicate the final plan on the proposed solution to the identified environmental problem, it is important to provide a clear background on the problem and to enumerate the materials and methods in carrying out the solution.
Evaluating Learning	The learners will identify the priority problem they would like to address.	Group Work: The group will finalize the table they previously worked on and list all the properties of material involved in the problem they prioritize. The proposed solution can be further enhanced through class discussions and the exchange of ideas.	Each group will finalize the table they previously worked on and list all the properties of materials involved in the problem they prioritized. Each group will present the proposed solution and the whole class will share ideas after the presentation	The group writes the final plan using the following format. Priority problems can be identified through the analysis of data obtained from the survey. I. Introduction: *This part provides background knowledge about the environmental problem and introduces the properties of materials that can be used or applied to solve it.* II. Problem: *State environmental problem/s observed in the community.* III. Proposed Solution: *Discussion of the proposed solution and how the knowledge of the properties of materials can help solve the problem.*

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				IV. Materials *Enumerate the materials needed to solve the environmental problem/s, including their uses and sources.* V. Procedure *This part describes the step-by-step procedure for solving the environmental problem/s. It can be presented through numbered sentences, illustrations, diagrams, or any other printed form of communication.* *Note: To effectively communicate the final plan for the proposed solution to the identified problem, it is important to provide a clear background on the problem and enumerate the materials and methods used in carrying out the solution*
Additional Activities for Application or Remediation (if applicable)			Research on the identified environmental problem, possible solution, and materials needed for the possible solution	If the learners were not able to finish the written plan, the teacher may have it as a group assignment.
Remarks				
Reflection				

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Criteria	Excellent (4)	Good (3)	Fair (2)	Needs Improvement (1)
Collaboration	The solution involves collaboration with others in the community or school. It demonstrates teamwork and cooperation to achieve the goal.	The solution shows some level of collaboration with others but could involve more teamwork and cooperation to be fully effective.	The solution lacks significant collaboration with others, and teamwork is minimal or absent.	The solution does not involve any collaboration with others, and there is no evidence of teamwork or cooperation.
Practicality	The solution is highly practical and feasible to implement. It considers available resources, time, and learners' capabilities.	The solution is practical and can be implemented with some effort. It takes into account resources and the abilities of learners.	The solution has some practical aspects but may be challenging to implement due to resource constraints or other factors.	The solution is not practical and may be difficult or impossible to implement given the resources and abilities of grade school learners.
Possible Environmental Impact	The solution has a significant positive impact on the environment. It effectively addresses the environmental problem and leads to noticeable improvements.	The solution has a positive impact on the environment and contributes to addressing the environmental problem, although the impact may be moderate.	The solution has some impact on the environment, but it may not fully address the environmental problem or lead to significant improvements.	The solution has little to no impact on the environment and does not effectively address the environmental problem or contribute to improvements.
Clarity and Presentation	The solution is clearly presented and easy to understand. It includes visual aids or demonstrations to enhance understanding.	The solution is well-presented and mostly clear. It includes some visual aids or explanations to help with understanding.	The solution is somewhat clear, but there are confusing or difficult-to-understand portions that need additional explanation or clarification.	The solution is poorly presented and unclear. It lacks visual aids or explanations, making it hard to understand or follow.

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