

4

# Lesson Exemplar for Science

Quarter 1

Week

7

## **Lesson Exemplar for Science Grade 4**

### **Quarter 1: Week 7**

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Published by the Department of Education  
Secretary: Juan Edgardo “Sonny” Angara  
Undersecretary: Gina O. Gonong

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

	DAY 1	DAY 2	DAY 3	DAY 4
<b>I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES</b>				
<i>A. Content Standards</i>	The Learners shall learn that communication skills and open-mindedness are needed in solving environmental issues.			
<i>B. Performance Standards</i>	By the end of the Quarter, learners describe chemical properties of materials and 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.			
<i>C. Learning Competencies</i>	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.
<i>D. Learning Objectives</i>	At the end of the lesson, the learners should be able to:  1.describe a survey questionnaire and discuss how a survey questionnaire is crafted  2.discuss how survey questionnaire is being crafted based on the	At the end of the lesson, the learners should be able to:  1.analyze the prepared survey questionnaire about environmental issues and concerns. 2.consult a teacher and another person in authority for the improvement of survey questionnaire	At the end of the lesson, the learners should be able to:  1. revise the simple questionnaire based on the agreement during consultation 2. finalize the survey questionnaire on environmental issues and concerns	At the end of the lesson, the learners should be able to:  1.conduct a survey of the chosen participants within the class 2. prepare a class profile based on the survey results

	identified environmental issues and concerns  3.prepare a simple survey questionnaire collaboratively			
<i>E. Instructional Design framework feature (s)</i>	Ideational (conceptual understanding & application of knowledge) Explore (gathering information)	Engage (stimulating inquiry)  Collaboration (peer learning, group project)	Engage (stimulating inquiry)  Collaboration (peer learning, group project)	Experience (immersive learning/simulation and interaction)  Collaboration (interaction among learners)  Creativity (encouraging thinking)
<i>F. 21<sup>st</sup> Century Skills</i>	Learning & Innovation – creativity, openness  Communication skills – teamwork, collaboration Interpersonal skills	Learning & Innovation – creativity, openness  Communication skills – teamwork, collaboration Interpersonal skills	Learning & Innovation – creativity, openness, reflective thinking  Communication skills – teamwork, collaboration Interpersonal skills	Learning & Innovation – creativity, openness  Communication skills – teamwork, collaboration
<b>II. CONTENT</b>	Gathering Scientific Information	Gathering Scientific Information	Gathering Scientific Information	Gathering Scientific Information
<b>III. LEARNING RESOURCES</b>				
<i>A. References</i>				
<i>B. Other Learning Resources</i>	Mascott, A. (2018). What should I include in my student classroom surveys? <i>WeAreTeachers</i> . Retrieved from <a href="https://www.qualtrics.com/blog/questionnaire">https://www.qualtrics.com/blog/questionnaire</a>	Mascott, A. (2018). What should I include in my student classroom surveys? <i>WeAreTeachers</i> . Retrieved from <a href="https://www.qualtrics.com/blog/questionnaire">https://www.qualtrics.com/blog/questionnaire</a>	Qualtrics. (2022). Your ultimate guide to questionnaires and how to design a good one. Retrieved from <a href="https://www.qualtrics.com/blog/questionnaire">https://www.qualtrics.com/blog/questionnaire</a>	Qualtrics. (2022). Your ultimate guide to questionnaires and how to design a good one. Retrieved from <a href="https://www.qualtrics.com/blog/questionnaire">https://www.qualtrics.com/blog/questionnaire</a>

IV. TEACHING AND LEARNING PROCEDURES				
Before/Pre-Lesson Proper				
Activating Prior Knowledge	<p>The teacher may ask the students to recall the last time that they answered a survey. The teacher may ask them to share what they remember regarding how that survey was conducted.</p>	<p>The teacher will ask the learners to do this activity.</p> <p>Title: Survey Questionnaire on Environmental Issues and Concerns in School</p> <p>Which of the following do you think are the environmental issues and concerns in school? Number it according from highest to lowest priority.</p> <p>_____ 1. Waste segregation.          _____ 2. Air pollution          _____ 3. Garbage          _____ 4. Corrosion          _____ 5. Water pollution          _____ 6. Too much heat in the classroom          _____ 7. Combustion of fuel          _____ 8. Too many dried leaves around the school          _____ 9. Plastics generated from the school canteen          _____ 10. Leftover foods.</p> <p><b>Question</b>          Do you think this is a good survey questionnaire? Why? Explain your answer.</p>	<p>The teacher can prompt the learners to recall what constitutes a good quality survey to prepare them for the critiquing.</p>	<p>The teacher will ask the learners to present the revised survey questionnaire from the Activity in Day 3</p>
Lesson Purpose/Intention	<p>The teacher will ask the learners.</p>	<p>The teacher will ask the learners.</p>	<p>The teacher will ask the students to take note of the characteristics of a good</p>	<p>The teacher will inform the students that today's session will be allotted for conducting their survey.</p>

	<p>What do you usually do if you want to know whether a certain activity, product, or something else is effective or not?</p> <p>Why is there a need to conduct a survey?</p>	<p>What are the criteria for a good survey questionnaire?</p>	<p>survey as they will use this in critiquing their classmate's work.</p>	
<p><i>Lesson Language Practice</i></p>	<p><b>Activity: Guess the word</b></p> <p>Describe the following words:</p> <p>_____ 1. way of collecting or gathering information from a group of people.</p> <p>_____ 2. this can include ideas, facts, or data</p> <p>_____ 3. set of questions for gathering information from group of people</p>	<p><b>Activity: 4 Pics 1 word</b></p> <p>(The teacher will prepare the 4 pics 1 word)</p> <p>Describe the following words:</p> <p>Open ended question _____</p> <p>Likert scale _____</p> <p>Statements _____</p>	<p>Each group will present its survey questionnaire for critiquing.</p> <p>The teacher and the learner will use the checklist in checking the survey form prepared.</p>	<p>The learner will conduct the revised survey to the identified participants.</p>
<b>During/Lesson Proper</b>				
<p><i>Reading the Key Idea/ Stem</i></p>	<p>The teacher will ask the learners to do Activity 1.1</p> <p><b>Title: "The Mystery of the Missing Recipe"</b></p>	<p>The learners will answer <b>Activity 2.1</b></p>	<p>The learners will present their completed worksheet to the class for critiquing."</p>	<p>The learner will conduct the revised survey to the identified participants.</p>



Once upon a time in a small village, there was a renowned bakery known for the recipe book on delicious pastries and secret family recipes passed down through generations. The bakery, run by the talented baker, Mrs. Clara, had been a beloved establishment for decades. However, one day, disaster struck. Mrs. Clara arrived at the bakery to find that her prized recipe book, containing the secret formulas for her most cherished treats, had been lost without a trace. Mrs. Clara searched high and low, but the recipe book was nowhere to be found. With the fate of the bakery hanging in the balance, Mrs. Clara knew she needed help. Desperate for answers, she

	<p>decided to turn to the people of the village for assistance. But how could she gather clues without knowing where to start?</p> <p>That's when Mrs. Clara had a brilliant idea – she would create a survey questionnaire and distribute it to the villagers, hoping to uncover any leads or suspicious activity. With determination in her heart, Mrs. Clara set to work crafting the perfect questionnaire, asking questions about the last known whereabouts of the recipe book, any unusual sightings, and potential suspects. Armed with stacks of questionnaires, Mrs. Clara set out to canvas the village, visiting homes, shops, and gathering spots where the townsfolk congregated. At first, some villagers were unsure of how a simple survey could solve the mystery. But Mrs. Clara's earnestness and determination soon won them over, and one by one, they eagerly filled out the questionnaires, determined to help their beloved baker.</p>			
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	<p>As the days passed, Mrs. Clara diligently collected and analyzed the survey responses, searching for any clues that could lead her to the missing recipe book. She discovered intriguing tidbits – reports of a mysterious figure lurking near the bakery late at night, whispers of a rival pastry chef with a penchant for sabotage, and even a rumor of a secret underground pastry society. With each new lead, Mrs. Clara grew more determined to crack the case and reclaim her cherished recipes. Armed with the insights gathered from the survey questionnaires, she embarked on a daring investigation, following clues and unraveling the mysteries hidden within the village.</p> <p>Finally, after weeks of tireless searching, Mrs. Clara's perseverance paid off. Acting on a tip from a helpful villager, she stumbled upon a hidden compartment beneath the bakery floorboards, where the missing recipe book lay concealed. With tears of joy streaming down her cheeks, Mrs. Clara embraced the beloved book, its pages worn</p>			
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	but intact, and breathed a sigh of relief. And so, thanks to the power of a simple survey questionnaire, Mrs. Clara saved the day, proving that sometimes, the answers we seek are closer than we think – hidden in the hearts and minds of those around us.												
<i>Developing Understanding of the Key Idea/ Stem</i>	The teacher will ask the learners:  <b>Questions:</b> 1. How did Mrs. Clara solve her problem?  2.What information did she get from the survey questionnaire?  3.How can you use a survey to gather valuable information from a group of people?	The learner will use this checklist in analyzing the survey questionnaire prepared.	The learners will present their work to the class for critiquing.	The teacher will facilitate in preparing the class profile based on the results of the survey.									
		<table><tr><td></td><td>YES</td><td>NO</td></tr><tr><td>1.Identify the objective of the survey: Understand what you need to find out (e.g., details about the last known whereabouts of an item).</td><td></td><td></td></tr><tr><td>2.Create clear and concise questions: Ensure questions are straightforward and easy to understand.</td><td></td><td></td></tr></table>				YES	NO	1.Identify the objective of the survey: Understand what you need to find out (e.g., details about the last known whereabouts of an item).			2.Create clear and concise questions: Ensure questions are straightforward and easy to understand.		
					YES	NO							
1.Identify the objective of the survey: Understand what you need to find out (e.g., details about the last known whereabouts of an item).													
2.Create clear and concise questions: Ensure questions are straightforward and easy to understand.													

		<p>3. Distribute the survey to the target audience: Share the survey with people who are likely to provide useful information</p> <p>4. Collect and analyze the responses: Look for patterns, clues, or leads in the answers provided by the respondents</p> <p>5. Act on the insights gathered: Use the collected information to guide your actions and solve the problem at hand</p>				
<p><i>Deepening Understanding of the Key Idea/Stem</i></p>	<p>The learners will answer activity 1.2</p> <p>Hello Grade 4! We want to know what you think about our new snack!</p>	<p>The learners will present their completed surveys to the class for critique."</p>	<p>The learners will present their work to the class for critique.</p>	<p>The teacher will discuss the purpose or use of the class profile that was generated from the survey.</p>		

	<p>1. Have you tried our new snack?  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p> <p>2. If yes, how did you like it?  <input type="checkbox"/> Loved it!  <input type="checkbox"/> It was good.  <input type="checkbox"/> It was okay.  <input type="checkbox"/> Didn't like it.</p> <p>3. What do you like the most about the snack?  <input type="checkbox"/> The taste  <input type="checkbox"/> The texture  <input type="checkbox"/> (crunchy, soft, etc.)  <input type="checkbox"/> The size of the snack          Other: _____</p> <p>4. What flavor did you try?  <input type="checkbox"/> Chocolate  <input type="checkbox"/> Strawberry  <input type="checkbox"/> Cheese          Other: _____</p> <p>5. Would you like to see more flavors?  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p> <p>6. If yes, which flavors would you like?  <input type="checkbox"/> Vanilla  <input type="checkbox"/> Banana  <input type="checkbox"/> Apple          Other: _____</p>			
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	<p>7.How often would you like to have this snack?</p> <p>_____Every day</p> <p>_____Once a week</p> <p>_____Once a month</p> <p>_____Rarely</p> <p>8.What could we do to make the snack better?</p> <p>_____</p> <p>Thank you for your feedback!</p> <p>Based on this sample survey, the teacher will ask the learners:</p> <p>1. What are the components of a survey questionnaire?</p> <p>2.How will you make a good survey questionnaire?</p>			
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### After/Post-Lesson Proper

<p><i>Making Generalizations and Abstractions</i></p>	<p>Ask the learners about their takeaways on the following:</p> <ul style="list-style-type: none"> <li>• Survey</li> <li>• Questionnaires</li> <li>• Data</li> <li>• Information</li> </ul> <p>Why do we need to conduct a survey questionnaire?</p> <p><b>Possible answers:</b></p> <p>1. Survey is a way to collect information or opinion from a group of people.</p>	<p>Have the learners answer the question below:</p> <p><i>How to craft a survey questionnaire?</i></p> <p><b>Possible answers:</b></p> <p>a. defines the purpose of the survey and the specific objectives you want to achieve</p> <p>b. determines the target population or audience for the survey.</p>	<p>Have the learners answer the question below:</p> <p><i>How will you improve your crafted survey questionnaire?</i></p> <p><b>Possible answers:</b></p> <p>Improving a crafted survey questionnaire involves several steps to ensure clarity, relevance, and</p>	<p>The teacher will facilitate in preparing the class profile based on the results of the survey.</p>
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	<p><i>2.Information can be knowledge, ideas, facts, or data</i></p> <p><i>3.Data refers to raw, unprocessed facts, figures, symbols, or observations typically collected or stored in a structured format.</i></p> <p><i>4.Survey questionnaire is a set of questions for the purpose of gathering information from a group of people.</i></p>	<p><i>c. decides on the most appropriate survey method(s) for reaching your target audience, such as online surveys, paper-based surveys, phone interviews, or in-person interviews.</i></p> <p><i>d. organizes the questionnaire into logical sections or themes based on the research objectives.</i></p> <p><i>e. use closed-ended questions (e.g., multiple-choice, Likert scale) for quantitative data and open-ended questions for qualitative insights.</i></p> <p><i>f. use clear and simple language that is easy for</i></p>	<p>effectiveness in gathering the desired information.</p> <p><i>1.Ensure that each question aligns with the survey's overall objectives.</i></p> <p><i>2.Be clear about what you want to learn from each question.</i></p> <p><i>3.Use simple language</i></p> <p><i>4.Make questions precise and specific.</i></p> <p><i>5.Ensure questions are neutral and do not lead the respondent to a particular answer.</i></p> <p><i>6.Organize questions into logical sections or themes.</i></p> <p><i>7.Make sure there is a natural flow from one question to the next.</i></p> <p>By following these steps, you can enhance the quality and effectiveness of your survey questionnaire, leading to more reliable and actionable data.</p>	
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<i>Evaluating Learning</i>	Learners will prepare survey questionnaires.	The learners will submit the improved survey questionnaire.	The learners will submit the revised survey questionnaire	The learners will submit the class profile of the survey.
<i>Additional Activities for Application or Remediation (if applicable)</i>				
<i>Remarks</i>				
<i>Reflection</i>				

## Answer Key

Day 1	Day 2	Day 3					Day 4
<b>Activity 1.1</b>  1.Mrs. Clara solved her problem by creating and distributing a survey questionnaire to the villagers. She used the responses from the questionnaires to gather clues and leads regarding the whereabouts of her missing recipe book. She followed up on the leads, ultimately finding the hidden recipe book.  2.Mrs. Clara obtained several pieces of important information:  a. Reports of a mysterious figure lurking near the bakery late at night.  b. Whispers of a rival pastry chef with a	<b>Activity 2.1</b>  YES: The question about candy wrappers addresses the issue of littering, which is a direct environmental concern.  YES: Asking about separate containers for paper and plastics is relevant to waste segregation, an important aspect of environmental management.  YES: The presence of cleaning materials relates to the ability to maintain a clean environment, which is crucial for addressing environmental concerns.  YES: Clean corridors indicate general cleanliness and maintenance, which impacts the overall environmental	Rubrics					
		Criteria	4	3	2	1	
		Content	Content is clear, detailed and highly relevant	Content is clear and relevant with some details	Content is somewhat clear and relevant but lacks details	Content is unclear or irrelevant	
		Creativity	Demonstrated exceptional creativity and originality	Demonstrates good creativity and originality	Demonstrates some creativity and originality	Lacks creativity and originality	
		Presentation	Presentation is highly engaging and well-organized	Presentation is engaging and organized	Presentation is somewhat engaging and organized	Presentation is not engaging and disorganized	
		Participation	Shows outstanding effort and participation	Shows good effort and participation	Shows some effort and participation	Shows minimal effort and participation	

<p>penchant for sabotage.</p> <p>c. A rumor of a secret underground pastry society.</p> <p>3.</p> <p>Purpose: To find clues about the missing recipe book.</p> <p>Audience: The villagers.</p> <p>Design: She asked about the last known whereabouts of the book, any unusual sightings, and potential suspects.</p> <p>Distribution: She visited homes, shops, and gathering spots to distribute the surveys.</p> <p>Collect Responses: She collected the filled-out questionnaires from the villagers.</p> <p>Analyze Data: She looked for common themes and</p>	<p>quality.</p> <p>YES: Having plants in the classroom can contribute to a better environment by improving air quality and aesthetics.</p> <p>2. What are the points to be remembered in crafting a survey questionnaire?</p> <p>a. Ensure questions are clear and easy to understand.</p> <p>b. Avoid jargon or technical terms that might confuse respondents.</p> <p>c. Questions should be directly related to the survey's objective.</p> <p>d. Each question should contribute to gathering information on the main topic.</p> <p>e. Clearly define terms if necessary</p>		
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<p>significant leads in the responses.</p> <p>Interpret Results: She identified reports of a mysterious figure, a rival chef, and a secret society.</p> <p>Act: She followed up on the leads, ultimately finding the hidden recipe book.</p> <p>Activity 1.2</p> <p>1.What are the components of a survey questionnaire?</p> <p>a. purpose of the survey b. questions which can be open-ended, closed-ended, yes or no questions, multiple choice, ranking questions c. closing statement</p> <p>2.How will you make a good survey questionnaire?</p>	<p>(e.g., what constitutes “cleaning materials”).</p> <p>f. Keep questions concise to maintain the respondent’s attention and avoid fatigue.</p> <p>g. Ensure the question doesn’t suggest a ‘correct’ answer.</p> <p>h. Use appropriate answer formats (e.g., YES/NO, Likert scale, multiple choice) that suit the question.</p> <p>i. Organize questions in a logical order, starting from general to specific.</p> <p>j. Conduct a pilot test with a small group to identify any issues with the questions.</p> <p>k. Make necessary adjustments based on feedback from the pilot test.</p>		
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<p>a. State the purpose of the survey</p> <p>b. Write a short introduction on why you are conducting a survey</p> <p>c. Create a clear and effective questions</p> <p>d. Make a closing statement about your survey</p>			
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