ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 4 (April 2026)

# Inquiry-Based Science Exposure and Environmental Awareness Among Grade 3 Pupils

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Date Submitted:
**February 24, 2026**

Date Accepted:
**March 15, 2026**

Date Published:
**April 24, 2026**

DOI:
**10.5281/zenodo.19717799**

**ABSTRACT**

Growing concern over children's environmental understanding has drawn attention to the role of inquiry-oriented science experiences in the elementary classroom. This investigation explored the relationship between inquiry-based science exposure and environmental awareness among Grade 3 pupils of Santa Isabel Sur Elementary School in the City of Ilagan, Isabela. Specifically, it described the pupils' extent of exposure to inquiry-based science experiences, assessed their level of environmental awareness, and determined whether a significant relationship existed between the two variables. The study employed a descriptive-correlational research design and utilized a validated researcher-made questionnaire with a Cronbach's alpha coefficient of 0.91. Data were analyzed using weighted mean, standard deviation, and Spearman rank-order correlation. Results revealed that the pupils demonstrated a very high extent of inquiry-based science exposure and a very high level of environmental awareness. The findings further indicated a significant positive relationship between the two variables, suggesting that greater exposure to inquiry-oriented science activities was associated with higher environmental awareness. These results highlight the educational value of guided inquiry in fostering not only science engagement but also environmental consciousness among young learners.

**Keywords**: *Descriptive-correlational design, elementary science education, environmental awareness, inquiry-based science, Grade 3 pupils*

## INTRODUCTION

Science education in the early grades is no longer expected to focus only on facts and recall. It is increasingly viewed as a foundation for helping children observe the world carefully, ask meaningful questions, explain everyday phenomena, and develop values that shape responsible behavior toward nature. UNESCO emphasizes that Education for Sustainable Development equips learners with the knowledge, skills, values, attitudes, and behaviors needed to make responsible decisions for the environment, society, and the future. In the same direction, OECD frameworks on climate and sustainability education explain that environmental awareness is not simply a matter of knowing ecological terms. It also involves familiarity with environmental issues, concern for the environment, and the capacity to respond through informed action (UNESCO, 2026; Nusche et al., 2024). These global directions make environmental awareness an urgent concern even at the elementary level, where lifelong habits of care, curiosity, and responsibility often begin. Within this educational shift, inquiry-based science has gained strong support because it places learners in an active role. Rather than receiving information passively, pupils are encouraged to ask questions, observe patterns, conduct simple investigations, analyze evidence, and

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communicate what they discover. The Philippine K to 12 Science Curriculum Guide explicitly states that science education aims to develop scientifically and environmentally literate learners who are responsible stewards of nature, informed decision makers, and effective communicators. It further identifies the curriculum as learner-centered and inquiry-based, emphasizing the use of evidence in constructing explanations (Department of Education, 2016). This orientation is particularly appropriate for young learners because inquiry allows them to connect school science with the concrete realities of their surroundings, making learning more meaningful and easier to internalize.

Dah et al. (2024), in a systematic review, found that inquiry approaches positively influenced students' conceptual understanding, motivation, attitudes toward science, scientific thinking skills, and science literacy, although implementation must be supported carefully. Similarly, Areepattamannil (2025) explained that inquiry-based science education should be understood as participation in scientific practices such as asking investigable questions, planning investigations, analyzing evidence, building models, and communicating findings. The same review noted that guided inquiry, rather than minimally supported inquiry, is more consistently associated with positive outcomes in learning and engagement. These findings are especially important in elementary classrooms, where structured guidance is necessary in order to help pupils transform curiosity into understanding.

Inquiry-based science is also increasingly linked to sustainability and environmental learning. Baptista et al. (2025) reported that when students investigated a local environmental issue through Inquiry-Based Science Education, they were able not only to identify the problem but also to understand reasons for action and, in many cases, plan concrete local responses. In a primary school context, Karacaoğlu (2024) found that pupils exposed to school practices aligned with environmental responsibility demonstrated high environmental awareness, particularly in relation to air, water, soil, and ecological balance. Together, these studies suggest that environmental awareness becomes stronger when children encounter science not as abstract information, but as a way of understanding real issues in their own surroundings. This is highly relevant to Grade 3 pupils, who are already developmentally capable of observing, classifying, comparing, and relating classroom lessons to their daily environment.

DepEd has affirmed that climate change and environmental concepts are integrated across the K to 12 curriculum and supported by programs that promote climate literacy and sustainable school practices (Department of Education, 2021, 2022). The science curriculum also emphasizes that, by the end of Grade 3, learners should acquire curiosity about themselves and their environment through the use of basic process skills, while newer curriculum documents continue to recognize direct interaction with the environment as a crucial factor in learning (Department of Education, 2016, 2024). In a school such as Santa Isabel Sur Elementary School in the City of Ilagan, Isabela, these policy directions gain concrete significance because pupils live and learn within a community where environmental conditions, daily practices, and school experiences can shape how they understand and value nature. Examining inquiry-based science exposure and environmental awareness among Grade 3 pupils can provide localized evidence on whether classroom exposure to inquiry-oriented science experiences may help nurture environmentally aware learners at an early stage of schooling.

## Literature Review

### *Inquiry-Based Science Education as a Learner-Centered Approach*

Inquiry-based science education is widely described as an approach in which learners do not merely receive scientific facts from the teacher but engage in asking questions, examining evidence, constructing explanations, and communicating what they have discovered. In the Philippine K to 12 Science Curriculum Guide, science is explicitly framed as learner-centered and inquiry-based, with strong emphasis on the use of evidence in constructing explanations and in relating concepts to real-life situations. The same curriculum also states that science education seeks to develop scientifically, technologically, and

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environmentally literate learners who become responsible stewards of nature and informed decision makers (Department of Education [DepEd], 2016).

Recent scholarship has strengthened this view by showing that inquiry-based science education is most effective when understood as guided participation in scientific practices. Areepattamannil (2025) explained that inquiry-based science education includes asking investigable questions, planning and conducting investigations, analyzing data as evidence, building models, arguing from evidence, and communicating findings. The same review concluded that guided, discourse-rich inquiry tends to support conceptual understanding, higher-order thinking, and motivation more reliably than loosely structured inquiry. In a related systematic review, Dah et al. (2024) reported that inquiry approaches positively affect students' learning in science, but they also emphasized that successful implementation depends on teacher support, classroom management, and appropriate scaffolding.

***Inquiry in the Elementary and Primary School Context***

The value of inquiry becomes even more apparent when considered in relation to young learners. The DepEd Science Curriculum Guide states that by the end of Grade 3, learners should have developed curiosity about themselves and their environment using basic process skills such as observing, communicating, comparing, classifying, measuring, inferring, and predicting. It further notes that these experiences should help children appreciate nature and practice health and safety measures (DepEd, 2016). This curriculum expectation suggests that the elementary years are a foundational stage for nurturing not only scientific understanding but also environmental sensitivity. In other words, inquiry at this level is meant to awaken children's curiosity and guide them toward responsible awareness of the world around them.

Empirical work supports the developmental appropriateness of this approach. Boaventura et al. (2020), in a study involving primary students, found that participation in an inquiry-based science activity on climate change positively influenced pupils' conceptual knowledge and investigation skills. Likewise, AlAli and Al-Barakat (2024) found that an environmental approach-based learning method among young children produced significantly better science process skills and cognitive achievement than conventional instruction.

***Environmental Awareness Among Primary Learners***

Environmental awareness is often treated as more than simple familiarity with environmental terms. UNESCO's Education for Sustainable Development agenda emphasizes that learners should develop the knowledge, values, attitudes, and behaviors needed to make responsible decisions for sustainability. This perspective places environmental awareness within a broader educational mission that involves understanding environmental issues and responding to them thoughtfully in everyday life. In school settings, this means that awareness includes not only knowing about nature and environmental problems but also valuing protection, conservation, and sustainable action (UNESCO, 2026).

Studies focused on school-age children indicate that environmental awareness can indeed be observed and developed in the primary years. Sánchez-Llorens et al. (2019) found that primary education students demonstrated higher environmental consciousness than secondary students in their comparison across school levels. In another study, Karacaoğlu (2024) reported that students in a primary school with a zero-waste policy showed high sensitivity to issues concerning air, water, soil, and ecological balance, suggesting that school practices can shape environmental awareness meaningfully. Rahmania (2024) also showed that environmental and psychosocial school factors are linked to students' sustainable behavior. Together, these works indicate that environmental awareness among children is not fixed. It may be strengthened by school experiences, environmental culture, and the kinds of learning opportunities pupils encounter.

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***The Link Between Science Learning and Environmental Awareness***

One of the most important assumptions behind the present study is that science exposure, particularly inquiry-based science exposure, may help strengthen environmental awareness. This connection is reasonable because inquiry-based science encourages learners to observe their surroundings, investigate causes and effects, and reflect on how natural systems function. When children encounter environmental topics through direct questioning, simple investigations, and evidence-based discussion, environmental issues become more concrete and meaningful to them. The DepEd curriculum itself links science learning with environmental literacy and stewardship, showing that science instruction in the Philippine setting is expected to contribute to environmentally responsible citizenship (DepEd, 2016).

Recent research further supports this linkage. Baptista et al. (2025) found that when students examined a local environmental problem through Inquiry-Based Science Education, they developed learning for action toward sustainability. Their work suggests that inquiry can help learners move from awareness of an environmental issue to a clearer sense of why action matters and how action may be taken. Although their participants were older than Grade 3 pupils, the study remains important because it demonstrates the educational logic of using inquiry as a bridge between science understanding and sustainability-related awareness. In a younger-child setting, AlAli and Al-Barakat (2024) similarly showed that environmental approach-based learning improved science process skills and cognitive achievement, indicating that context-rich and environment-linked science learning may help children engage more deeply with real-world content.

***Guided Inquiry as the Most Suitable Form for Young Learners***

Not all forms of inquiry operate in the same way. Literature increasingly distinguishes between highly open inquiry and guided inquiry, with the latter being more appropriate in many school settings. Dah et al. (2024) noted that inquiry has positive effects on students' science learning but also requires teacher support and flexible classroom management. Areepattamannil (2025) similarly argued that the key issue is not simply whether inquiry is used, but how it is orchestrated across phases of preparation, investigation, and consolidation. The review emphasized that guided inquiry works best when learners are supported through discussion, prediction, evidence-gathering, and reflection rather than being left to discover everything independently.

***Relevance to the Philippine Elementary School***

The Philippine curriculum gives this study particular relevance. DepEd's curriculum positions science learning as connected to local settings, real-life situations, and the development of environmental literacy. In Grade 3, learners are expected to become more curious about their surroundings and to appreciate nature as they study objects, materials, plants, animals, and environmental changes (DepEd, 2016). This means that the study of inquiry-based science exposure and environmental awareness is not separate from the intended outcomes of basic education. Rather, it is directly aligned with the curriculum's expectations for elementary learners.

At the same time, UNESCO's sustainability agenda highlights the need for schools to cultivate environmentally responsible thinking and action from an early age. When placed side by side, the international direction on sustainability education and the Philippine curriculum's inquiry-based orientation create a strong basis for examining how science experiences in school may shape children's environmental awareness.

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## METHODS

### Research Design

This study employed a descriptive-correlational research design. The descriptive component was used to determine the extent of inquiry-based science exposure and the level of environmental awareness among Grade 3 pupils. This design was appropriate because the study sought to present the existing conditions of the two variables as they naturally occurred in the school setting without manipulating any classroom or learner-related factors. On the other hand, the correlational component was used to examine whether a significant relationship existed between inquiry-based science exposure and environmental awareness. Since the investigation intended to identify patterns of association rather than establish cause-and-effect relationships, the descriptive-correlational approach was considered the most suitable design for the study. It allowed the researcher to generate a clear picture of the pupils' science learning exposure and environmental awareness while also determining how these two variables were linked.

### Research Locale

The study was conducted at Santa Isabel Sur Elementary School located in the City of Ilagan, Isabela. The school served as an appropriate setting for the investigation because it catered to elementary learners whose science experiences and environmental understanding were directly relevant to the focus of the study. As a public elementary school, it reflected the actual instructional conditions under which inquiry-based science learning was carried out in the basic education context. The locale was also considered suitable because the pupils were exposed to classroom instruction and school-based activities that could influence their awareness of environmental concepts and practices. The school environment, together with the surrounding community context, provided a meaningful setting for examining how science exposure may relate to environmental awareness among young learners.

### Participants and Sampling Technique

The participants of the study were the Grade 3 pupils of Santa Isabel Sur Elementary School. They were selected because they belonged to the grade level where foundational science skills, curiosity, and environmental understanding were actively being developed through classroom instruction. Their inclusion in the study was aligned with the objectives of the research, which focused specifically on early elementary learners.

A complete enumeration sampling technique was employed in selecting the participants. This technique was deemed appropriate because the study concentrated on all available members of the target group within the identified grade level. By including the entire population of Grade 3 pupils who met the inclusion criteria, the researcher was able to obtain a more accurate representation of the science exposure and environmental awareness of the group under study. This also strengthened the relevance of the findings to the actual school context where the investigation was conducted.

### Research Instrument

The study utilized a researcher-made survey questionnaire as the primary data-gathering instrument. The instrument was designed to measure two major variables: inquiry-based science exposure and environmental awareness among Grade 3 pupils. The first part of the questionnaire focused on the pupils' exposure to inquiry-based science experiences, such as observing, asking questions, participating in simple investigations, discussing findings, and relating science lessons to their surroundings. The second part measured environmental awareness through indicators such as care for nature, awareness of environmental practices, recognition of environmental problems, and responsibility toward the surroundings.

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To ensure content adequacy and appropriateness, the instrument was subjected to expert validation by specialists in elementary education, science instruction, and educational research. Their comments and suggestions were carefully incorporated to improve the clarity, relevance, age appropriateness, and alignment of the items with the study objectives. After revision, the questionnaire was pilot-tested to determine its internal consistency. The result of the reliability testing yielded a Cronbach's alpha coefficient of 0.91, indicating that the instrument possessed very high reliability and was appropriate for use in the conduct of the study.

The items were presented using a simplified response format suitable for Grade 3 pupils, with clear wording and guided administration to ensure that the respondents could understand and answer the statements properly.

**Data Gathering**

Before the actual data collection, the researcher formally sought permission from the proper school authorities to conduct the study at Santa Isabel Sur Elementary School. Upon approval, the researcher coordinated with the school head and class advisers regarding the schedule and procedures for the administration of the questionnaire. Since the participants were young learners, the instrument was administered in a guided manner to ensure that the instructions and statements were properly understood.

Prior to the administration of the instrument, the purpose of the study was explained in a simple and age-appropriate manner. The researcher ensured that the pupils were made comfortable and that the process was conducted in an orderly, non-threatening, and child-friendly environment. The accomplished questionnaires were then collected, checked for completeness, and organized for data coding and statistical treatment. Afterward, the responses were tabulated and prepared for analysis based on the objectives of the study.

**Data Analysis**

The data gathered were analyzed using appropriate statistical tools. To answer the questions on the extent of inquiry-based science exposure and the level of environmental awareness, the weighted mean and standard deviation were used. The weighted mean was employed to determine the general tendency of responses for each indicator and overall variable, while the standard deviation was used to describe the consistency or variability of the responses. To determine the significant relationship between inquiry-based science exposure and environmental awareness, Spearman rank-order correlation coefficient was utilized. This statistical treatment was considered appropriate because the responses were derived from ordinal-scale data and involved examining the direction and strength of association between the two variables. Spearman rho provided a suitable and dependable measure of relationship for the type of data gathered in the study.

**Ethical Consideration**

The study observed the necessary ethical standards in the conduct of research involving young learners. Permission to conduct the study was obtained from the appropriate school authorities before data collection began. Since the participants were pupils, informed consent procedures were carefully observed through coordination with the school and concerned adults responsible for the learners. The purpose of the study, as well as the nature of participation, was explained clearly in a manner appropriate to the participants' level of understanding.

The researcher ensured that participation was voluntary and that no pupil was forced to answer the questionnaire. Confidentiality and anonymity were strictly maintained by not writing the names of the participants on the instrument and by using the gathered information solely for academic purposes. The responses were treated with utmost privacy, and all data were presented in summarized form only. Throughout the conduct of the study, the welfare, dignity, and protection of the pupils were given primary consideration.

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## RESULTS AND DISCUSSION

Table 1. *Extent of Inquiry-Based Science Exposure Among Grade 3 Pupils in Terms of Observing and Questioning*

| Indicators | Mean | SD | QD |
|---|---|---|---|
| 1. I am encouraged to observe plants, animals, and objects during science lessons. | 4.31 | 0.67 | Very High |
| 2. My teacher asks me to share what I notice during science activities. | 4.27 | 0.71 | Very High |
| 3. I am given chances to ask questions about what I see in science class. | 4.18 | 0.74 | High |
| 4. Science lessons allow me to wonder why things happen in nature. | 4.24 | 0.70 | Very High |
| 5. I am guided to talk about my ideas before the teacher gives the answer. | 4.12 | 0.76 | High |
| Overall Mean | 4.22 | 0.72 | Very High |

Scale: 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 1 shows that the Grade 3 pupils had a very high extent of inquiry-based science exposure in terms of observing and questioning, with an overall mean of 4.22 and a standard deviation of 0.72. This indicates that the pupils were frequently exposed to science experiences that invited them to notice details, ask questions, and express their initial thoughts about natural phenomena. The highest mean of 4.31 for the statement on being encouraged to observe plants, animals, and objects suggests that observation was a strongly practiced part of classroom science instruction. This is an encouraging result because observation is one of the most basic and essential inquiry skills for young learners.

The results further imply that the science learning environment in the school supported curiosity and active engagement rather than passive listening alone. The indicators related to sharing observations, asking questions, and wondering why things happen all received high to very high ratings, showing that inquiry-oriented practices were meaningfully present in classroom instruction. The relatively lower, though still high, mean of 4.12 for being guided to talk about ideas before the teacher gives the answer suggests that there was still room to deepen open-ended dialogue and learner-generated reasoning. Nonetheless, the findings point to a classroom setting where pupils were regularly given opportunities to think, notice, and inquire, which is consistent with the learner-centered nature of inquiry-based science instruction.

Table 2. *Extent of Inquiry-Based Science Exposure Among Grade 3 Pupils in Terms of Investigation and Evidence Sharing*

| Indicators | Mean | SD | QD |
|---|---|---|---|
| 1. I join simple science activities or experiments in class. | 4.35 | 0.65 | Very High |
| 2. I am guided to find answers through simple investigation. | 4.19 | 0.73 | High |
| 3. I use what I observe to explain my answer during science activities. | 4.11 | 0.77 | High |
| 4. My teacher lets us talk about what happened after an activity. | 4.28 | 0.68 | Very High |
| 5. I am encouraged to compare results and explain what I learned. | 4.16 | 0.75 | High |
| Overall Mean | 4.22 | 0.72 | Very High |

Scale: 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 2 reveals that the pupils likewise had a very high extent of inquiry-based science exposure in terms of investigation and evidence sharing, as shown by the overall mean of 4.22 and standard deviation of 0.72. This means that the respondents were often involved in simple activities that required them not only to participate but also to think about results and explain what they learned. The highest mean of 4.35 indicates that joining simple science activities or experiments was a common classroom experience. This

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is important because hands-on engagement is one of the strongest entry points for developing scientific understanding among young children.

The results also show that inquiry in the classroom extended beyond activity participation. The pupils reported that they were guided to find answers through simple investigation, discuss outcomes, compare results, and use observations to support explanations. These responses suggest that the science experiences of the pupils included essential features of inquiry, particularly the movement from doing to reflecting. The lowest mean of 4.11 for using observations to explain answers may indicate that while pupils were frequently involved in activities, transforming observations into verbal explanations remained a developing skill. This is understandable among Grade 3 pupils, who are still building confidence in communicating evidence-based ideas. Overall, the findings suggest that inquiry exposure at the school was not limited to demonstration-based teaching but included active engagement with simple evidence and discussion.

Table 3. *Overall Extent of Inquiry-Based Science Exposure Among Grade 3 Pupils*

| Dimensions | Mean | SD | QD |
|---|---|---|---|
| Observing and Questioning | 4.22 | 0.72 | Very High |
| Investigation and Evidence Sharing | 4.22 | 0.72 | Very High |
| Grand Mean | 4.22 | 0.72 | Very High |

**Scale:** 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 3 presents the overall extent of inquiry-based science exposure among Grade 3 pupils. The grand mean of 4.22 with a standard deviation of 0.72 indicates a very high level of exposure. Both dimensions obtained the same overall mean, showing a balanced presence of inquiry-related classroom practices across observation, questioning, investigation, and sharing of evidence. This suggests that the pupils' science experiences were generally rich in exploratory and participatory opportunities.

This finding implies that the science instruction received by the Grade 3 pupils was strongly aligned with inquiry-oriented learning. It reflects a teaching approach that exposed learners to the processes of science in ways suited to their level. Since inquiry-based experiences are expected to stimulate curiosity, engagement, and deeper understanding, the very high result points to a positive instructional environment that may support not only science learning but also broader dispositions such as awareness of one's surroundings and care for the environment.

Table 4. *Level of Environmental Awareness Among Grade 3 Pupils in Terms of Care for Nature and Daily Environmental Practices*

| Indicators | Mean | SD | QD |
|---|---|---|---|
| 1. I know that plants, animals, and water should be taken care of. | 4.46 | 0.59 | Very High |
| 2. I throw trash in the proper place. | 4.41 | 0.63 | Very High |
| 3. I help keep my classroom and surroundings clean. | 4.36 | 0.66 | Very High |
| 4. I know that saving water and electricity is important. | 4.33 | 0.68 | Very High |
| 5. I understand that people should not harm nature. | 4.38 | 0.64 | Very High |
| Overall Mean | 4.39 | 0.64 | Very High |

Scale: 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 4 shows that the Grade 3 pupils had a very high level of environmental awareness in terms of care for nature and daily environmental practices, with an overall mean of 4.39 and a standard deviation of 0.64. The highest mean of 4.46 indicates that the pupils strongly recognized that plants, animals, and water should be cared for. This suggests that the respondents already possessed a strong basic awareness of environmental responsibility, particularly in relation to living things and natural resources.

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The consistently very high ratings across all indicators show that environmental awareness was reflected not only in ideas but also in simple daily behaviors such as proper waste disposal, classroom cleanliness, and resource conservation. The findings suggest that the pupils were already internalizing practical habits that are associated with environmental responsibility. Since these behaviors are often formed early, the results imply that the school and home environments may both be contributing to the development of pro-environmental attitudes and practices among the learners.

Table 5. *Level of Environmental Awareness Among Grade 3 Pupils in Terms of Recognition of Environmental Problems and Personal Responsibility*

| Indicators | Mean | SD | QD |
|---|---|---|---|
| 1. I know that too much trash can harm the environment. | 4.34 | 0.66 | Very High |
| 2. I understand that burning garbage can be harmful. | 4.21 | 0.73 | Very High |
| 3. I know that dirty surroundings can affect people's health. | 4.29 | 0.70 | Very High |
| 4. I believe children can help protect the environment. | 4.37 | 0.65 | Very High |
| 5. I feel that I should do my part in caring for the environment. | 4.40 | 0.62 | Very High |
| Overall Mean | 4.32 | 0.67 | Very High |

Scale: 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 5 indicates that the pupils also had a very high level of environmental awareness in terms of recognizing environmental problems and personal responsibility, as reflected in the overall mean of 4.32 and standard deviation of 0.67. The highest mean of 4.40 for feeling responsible in caring for the environment suggests that the pupils did not view environmental protection as something only adults should do. Instead, they saw themselves as capable contributors, which is a promising sign for the development of responsible habits at an early age.

The findings further show that the respondents were already aware of common environmental concerns such as waste accumulation, burning garbage, and unhealthy surroundings. Their recognition of these problems, combined with their sense of personal responsibility, reflects more than simple awareness of environmental words or slogans. It suggests an emerging understanding that environmental conditions affect people and that even children have a role in helping maintain a clean and safe environment. Such awareness is important because it may influence how pupils behave in school and at home.

Table 6. *Overall Level of Environmental Awareness Among Grade 3 Pupils*

| Dimensions | Mean | SD | QD |
|---|---|---|---|
| Care for Nature and Daily Environmental Practices | 4.39 | 0.64 | Very High |
| Recognition of Environmental Problems and Personal Responsibility | 4.32 | 0.67 | Very High |
| Grand Mean | 4.36 | 0.66 | Very High |

Scale: 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 6 shows the overall level of environmental awareness among the Grade 3 pupils. The grand mean of 4.36 and standard deviation of 0.66 indicate a very high level of environmental awareness. Among the two dimensions, care for nature and daily environmental practices obtained the higher mean of 4.39, while recognition of environmental problems and personal responsibility followed closely with 4.32. This pattern suggests that the pupils were slightly stronger in concrete everyday practices than in issue-based environmental understanding, although both dimensions were evidently strong.

This overall finding points to a favorable condition among the learners. It suggests that Grade 3 pupils in the school were already aware of the importance of caring for the environment and were able to connect that awareness to personal conduct. The result is encouraging because it indicates that environmental values may already be taking root at an early age. It also strengthens the educational

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significance of science instruction, particularly when science experiences are linked to pupils' immediate surroundings and daily actions.

Table 7. *Test of Relationship Between Inquiry-Based Science Exposure and Environmental Awareness Among Grade 3 Pupils*

| Variables | Spearman rho | p-value | Decision on Ho | Interpretation |
|---|---|---|---|---|
| Inquiry-Based Science Exposure and Environmental Awareness | 0.691 | 0.001 | Reject Ho | Significant Moderate Positive Relationship |

Table 7 presents the test of relationship between inquiry-based science exposure and environmental awareness among Grade 3 pupils. The computed Spearman rho of 0.691 indicates a moderate positive relationship, while the p-value of 0.001 shows that the relationship was statistically significant at the 0.05 level. Therefore, the null hypothesis stating that there is no significant relationship between inquiry-based science exposure and environmental awareness among the respondents was rejected.

This result means that pupils who experienced stronger inquiry-based science exposure also tended to demonstrate higher environmental awareness. The positive direction of the correlation suggests that as pupils were more frequently exposed to observing, questioning, investigating, and discussing evidence in science class, their awareness of environmental care, problems, and personal responsibility also tended to increase. Although the result does not establish causation, it strongly indicates that inquiry-oriented science experiences may be associated with better environmental awareness among young learners.

The finding is educationally meaningful because it shows that inquiry-based science may do more than improve participation in science lessons. It may also contribute to shaping how children understand and respond to their environment. When learners are encouraged to observe nature, ask why things happen, examine simple evidence, and discuss what they discover, environmental concepts appear to become more concrete and personally relevant. For Grade 3 pupils, this kind of exposure may help transform science from a school subject into a way of seeing and valuing the world around them.

## CONCLUSION

The Grade 3 pupils of Santa Isabel Sur Elementary School in the City of Ilagan, Isabela demonstrated a very high extent of inquiry-based science exposure and a very high level of environmental awareness, which indicates that the learners were meaningfully exposed to science experiences that encouraged observation, questioning, simple investigation, and evidence sharing while also showing strong awareness of environmental care, daily eco-friendly practices, recognition of environmental problems, and personal responsibility toward nature. The significant positive relationship between inquiry-based science exposure and environmental awareness further suggests that when pupils are more actively engaged in inquiry-oriented science learning, they also tend to become more environmentally aware. Based on these findings, it is recommended that teachers continue to strengthen inquiry-based science instruction through age-appropriate, hands-on, and discussion-centered learning activities that connect lessons to the pupils' immediate environment; school heads may support the integration of more environment-related classroom and school-based science activities; parents and community members may reinforce environmental practices at home and in the community; and future school interventions may focus on enriching guided inquiry experiences that can further deepen pupils' scientific curiosity and environmental responsibility from an early age.

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