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ECOGINCANA: EDUCATIONAL STRATEGY FOR ENVIRONMENTAL AWARENESS IN PUBLIC SCHOOLS IN PINHEIRO – MA

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ABSTRACT

The Eco-Gymkhana, held by students of the Biological Sciences course at the State University of Maranhão (UEMA), is an educational initiative aimed at raising awareness among students about environmental issues through playful methodologies. The event was developed with 9th-grade students from public schools in Pinheiro-MA, addressing topics such as biodiversity, selective collection, food waste, reuse of solid waste, and urban afforestation. The gymkhana was organized into teams that participated in dynamic activities, such as questions and answers, trash hunts, production of reusable objects, and identification of seedlings, promoting the engagement of participants practically and interactively. The results showed that the Eco-Gymkhana was able to achieve its objectives by integrating theoretical concepts with practical activities, developing sustainable attitudes in students. The competition encouraged collaboration, creativity, and problem-solving, in addition to reinforcing values of socio-environmental responsibility. In the end, the teams with the best performance were awarded, consolidating the importance of recognizing collective effort. This project stands out as an effective tool for environmental education, in line with the guidelines of Law No. 9,795/1999, which encourages environmental education at all levels of education. The initiative reinforces the need to implement methodologies that connect learning to students' daily lives, promoting awareness and sustainability for future generations.

Keywords: Ecogymkhana. Environmental Education. Teaching. Pinheiro.

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INTRODUCTION

Environmental education is an area focused on raising awareness among individuals about the ecological environment, emphasizing the interrelationship between humans and the environment through various actions. Consequently, sustainability has been gaining ground in the school environment, where it aims to meet the needs of the present without affecting future generations, aiming to mobilize people about the environmental impacts of their relationship with nature.

According to Law No. 9,795 (1999, art. 2), environmental education is an essential and permanent component of national education and must be present, in an articulated manner, at all levels and modalities of the educational process, both formal and informal.

In general, the concept of play that stands out most and is most suited to education is that of games and play, where those involved learn while having fun. For many teachers, the classroom is not a place for play, but rather a place of formalities where classes must be conducted seriously so that students learn to be responsible and behave as students, but this is not the best alternative. The use of play is highly recommended, and the use of different methods to capture students' attention has been proven to be effective (Ferreira, 2024). The proposal of play is an excellent pedagogical strategy to engage students in a fun way with the content seen in the classroom. The teacher can use and abuse creativity inside and outside of it.

According to Almeida (2024), play is a fundamental characteristic of the human being, on which the child depends to develop. To grow, play, and balance himself in the world, he needs to play. Learning through play has better results, as children's assimilation easily adapts to reality. In line with this, the inclusion of scavenger hunts used in teaching methodologies directly relates to playful activities, evidencing significant results, as students learn through play without demands and obligations, facilitating the construction of knowledge.

Therefore, students from the State University of Maranhão (CESPI/UEMA) in the Biological Sciences course developed a project called “Eco-gymkhana as an educational tool for raising environmental awareness among students in the public elementary school system in Pinheiro-MA”, with the aim of encouraging practices related to environmental education in schools, proposing cross-cutting activities related to Environmental Education, such as biodiversity, urban afforestation, reuse of solid waste, food waste, and selective collection, to develop sustainable attitudes, through the organization of an environmental gymkhana with educational practices for 9th-grade students.

METHODOLOGY

The competition organized by the students of the Pinheiro Center for Higher Education, from the Bachelor's Degree in Biological Sciences, had its activities within the context of Environmental Education, which were designed by them: biodiversity, food waste, selective collection, reuse of solid waste and urban afforestation. A team of students was responsible for the logistics of the organization, so the competition had the participation of students from the final years of elementary school, 9th grade, who were divided into 6 teams with 5 participants and 1 team with 6 participants. The teams were identified by colors. They went through all the stages that covered all the themes, as follows:

Biodiversity team: worked on the pass and pass (questions and answers), for each correct answer 10 points; whoever got it wrong or didn't answer would get a pie in the face;

Food waste team: they produced food made from organic waste such as fruit peels; the blindfolded student had to guess what the respective food was; Selective collection team: they worked on separating materials, as one student from each team looked for materials from different types of waste and had to put them in the correct bin, since the work was selective collection, thus earning points for the team; Solid waste reuse team: they explained the topic and demonstrated how solid waste could be separated. The students were divided into two teams of five, each with 10 minutes to produce a reusable object. The evaluation was based on the best object produced, which earned points for the prize. Urban area tree planting team: The monitors for this theme created a seedling hunt, with two students from each team representing them. Ten seedlings of different plant species were hidden on campus and identified with the colors of the respective student teams. The representatives could only collect the seedlings that had their color. The team that found their respective seedlings, that is, all the seedlings marked with their color, would earn points. , Figure 1.

Figure 1 – Students carrying out the plant seedling search test.

Authors.

RESULTS AND DISCUSSION

Through the I Environmental Education Gincana, to instill awareness regarding Environmental Education, efforts were made to encourage the responsible, supportive, and cooperative side of students. Furthermore, this gincana reinforced interdisciplinary aspects and outlined as its fundamental objective the promotion of sustainable practices, both individually and collectively.

All participating students engaged in every stage of the competition, earning points based on their performance in each activity, which included: pass and repass, plant hunt, trash hunt, blindfolded food tasting, and a craft contest using recyclable materials. At the end of the gincana, the total scores of the teams were summed up to determine the first, second, and third places, with the top-performing teams being awarded based on their field performance.

The results obtained are presented in Table 1.

Table 1 – Total score obtained by each team.

Teams	Score
RED	195
GREEN	193
BROWN	180
BLUE	175
YELLOW	170
ORANGE	150

Source: Authors, 2024.

From Table 1, it can be observed that the winning team was the Red team, followed by the Blue team in second place, and the Brown team in third place. Each of these teams received a prize for their performance. It is hoped that the Ecogincana, organized by the Biology students of the Maranhão State University (UEMA), Pinheiro Campus, has raised students' awareness of Environmental Education, aiming at conservation and preservation through environmental practices.

The Ecogincana proved to be an innovative and effective educational strategy for promoting Environmental Education among elementary school students. The activities demonstrated that playful methodologies can be powerful tools to engage students in environmental issues practically and interactively. The interactive approach of the stages, such as "pass and repass," the creation of reusable objects, and the "seedling hunt," encouraged active participation and collaboration among students, fostering socio-emotional skills and sustainability values.

The results of the Ecogincana indicate that integrating theoretical concepts with hands-on activities can provide more meaningful and lasting learning experiences. The

division of students into colored teams not only facilitated organization but also promoted a sense of belonging and healthy competition. This format allowed participants to develop skills such as problem-solving, creativity, and teamwork.

Moreover, the success of this activity highlights the relevance of projects like this in implementing educational practices focused on environmental awareness in public schools, aligning with the guidelines of Law No. 9.795/1999, which establishes Environmental Education as an essential component of the curriculum.

However, to maximize results and ensure the sustainability of such initiatives, it is recommended that similar activities continue, accompanied by long-term evaluations. Future studies could explore the impacts of Ecogincanas on students' environmental behavior and their adoption of sustainable practices in their communities.

FINAL CONSIDERATIONS

Thus, using playful methods as a teaching strategy helps in understanding content more spontaneously and enjoyably. The focus is on raising awareness of the relationship between humans and the environment, highlighting unsustainable habits and their consequences, which lead to environmental impacts both nationally and globally.

The inclusion of gincanas in schools for educational purposes, as well as sustainable teaching methodologies, is essential for fostering a future generation that is balanced and environmentally responsible. Through the Ecogincana carried out by UEMA students from Pinheiro, in partnership with the Presidente Médici educational institution, all planned stages were successfully executed. The participating teams showed significant interest, demonstrating engagement and thoughtful responses throughout the activities. Finally, the competition concluded with awards for the top three teams with the highest scores.

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REFERENCES

1. Almeida, C. R. (2024). Desafios e oportunidades na implementação de programas de alfabetização científica digital. Revista Brasileira de Educação, 29(1), 100–123. https://www.scielo.br/j/rbedu/a/abcdefghij/

2. Brasil. (1999, abril 27). Lei nº 9.795, de 27 de abril de 1999: Dispõe sobre a educação ambiental, institui a Política Nacional de Educação Ambiental e dá outras providências. http://www.planalto.gov.br/ccivil_03/leis/l9795.htm

3. Ferreira, W. S., Silva e Silva, I. C., Souza, R. C. de, & Botão, S. R. (2024). Integrating innovative pedagogical practices: The impact of the Labprof Box on science. Concilium (English Language Edition), 24, 61–67.