

Let's reveal the secrets of chemistry in the environment to children

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This article aimed to determine the effectiveness of an innovative approach to teaching chemistry through experiential learning in a chemical laboratory followed by theoretical instruction by teachers and subsequent theoretical teaching by teachers. Experiential learning and an excursion were completed by twelve-year-old elementary school pupils together with their chemistry teacher in the chemical laboratory at the Institute of Integrated Security, where they were shown simple chemical experiments. During the theoretical classes, the processes that they had previously seen in the laboratory, were explained.

During the excursion, the pupils carried out practical experiments under the guidance of university teachers, which enabled them not only to visualize theoretical knowledge but also to gain practical experience with chemical techniques. Subsequent teaching was designed to link practical experience with theory, improving overall understanding and retention of the subject matter. Preliminary observations indicate that combining the theoretical curriculum with practical examples increases students' motivation and interest even in such a subject as chemistry. This can lead to a better understanding and long-term retention of acquired knowledge.

In addition, the article focuses on investigating the impact of an innovative approach on the environmental awareness of pupils, as the experiments were focused on chemical processes related to environmental protection. The preliminary results of the processing of the results from the interviews with pupils during the excursion and the structured interview with the teacher indicate a positive impact of this innovative method on the educational process of the pupils. The article provides valuable insights for educators and education experts aiming to implement experiential learning into the pedagogical process to improve the understanding of the basic principles of chemistry and promote environmental awareness among younger generations.

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