

APPLICATION OF ECOLOGICAL GAMES AND SIMULATIONS IN CHEMISTRY LESSONSNagiyev K. J., Mirzayeva A. M., Mirzayeva S. A.

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This article explores the ways of applying ecological games and simulations in chemistry lessons. Interactive and practical approaches not only increase students' interest in the lesson but also develop their ecological awareness and creative thinking skills aimed at solving problems. The article presents the impact of using these methods on educational outcomes and provides examples of their application. In the modern era, the rapid development of science and technology necessitates new approaches and methods in education. In subjects like chemistry, which often rely heavily on theoretical knowledge, maintaining students' interest and engagement can be challenging. Therefore, teachers must use new methods to make the teaching process more engaging and interactive. Ecological games and simulations are very effective tools in this regard, as they influence not only the acquisition of chemical knowledge but also the formation of conscious approaches to ecological problems.

Ecological games and simulations allow students to understand and seek solutions to ecological problems they encounter in real life. For example, topics such as air pollution, maintaining clean water resources, and recycling waste materials are transformed into practical tasks that students can easily comprehend and apply through games. This approach strengthens students' sense of responsibility towards nature and enhances their analytical and critical thinking skills. On the other hand, ecological games and simulations are also essential teaching tools for teachers. Through these methods, teachers can customize lessons to better suit students' interests and present activities aligned with their areas of curiosity. Simulations enable students to conduct experiments in virtual environments that might not be possible in a laboratory setting, thus increasing the effectiveness of teaching. As ecological problems become more globally significant in the modern world, it is essential to instill this awareness in students and shape them into conscious and responsible citizens. Applying ecological games and simulations in chemistry lessons is an effective way to shape students' attitudes towards nature and foster interest in solving ecological problems. The purpose of this article is to demonstrate the effectiveness of applying ecological games and simulations in chemistry lessons, examine how these methods influence the development of students' knowledge and skills, and provide practical examples of their application. Ecological games and simulations help students transform theoretical knowledge into practical skills. This approach not only develops students' analytical thinking but also directs them towards solving ecological problems. For teachers, these methods offer opportunities to make the teaching process more engaging and interactive.

Conclusion. Research and experiments show that ecological games and simulations play a significant role in developing students' knowledge and skills in chemistry lessons. These methods ensure active student participation in the educational process, foster a conscious approach to ecological problems, and strengthen creative thinking skills. Games help students develop teamwork and problem-solving abilities, contributing to the enhancement of social skills. Ecological simulations provide students with the opportunity to better understand complex chemical processes. For instance, observing processes like air pollution, water purification, and recycling of waste materials in a virtual environment helps students comprehend the real-world impact of these phenomena more accurately. All of this demonstrates that ecological games and simulations elevate the level of chemistry lessons to a new stage, adding values like creativity, interest, and responsibility to the education system. The broader application of these methods in the future will encourage students to develop a greater interest in science and play an active role in finding solutions to ecological problems.