

USING DIDACTIC GAMES IN TEACHING THE BASIC CONCEPTS OF CHEMISTRY

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Chemistry, as a fundamental natural science, plays an essential role in educating students about the structure, properties, and transformation of matter. However, abstract concepts in chemistry may be difficult for some students to grasp. Traditional teaching methods often involve theoretical explanations, which may not always be effective in ensuring full comprehension. Students may struggle with visualizing atomic and molecular interactions or understanding the significance of chemical formulas and equations. Therefore, incorporating didactic games into the teaching process serves as an effective method to encourage active learning by engaging students in problem-solving activities, fostering critical thinking, and providing an interactive way to explore chemistry concepts. Didactic games offer a hands-on approach to learning that enhances conceptual understanding by making lessons more enjoyable and dynamic [1].

These games cater to different learning styles, allowing students to collaborate, compete, and discover knowledge in a meaningful way. Furthermore, they contribute to developing essential skills such as logical reasoning, teamwork, and creativity. Implementing didactic games in chemistry lessons ensures that students do not merely memorize concepts but actively engage in applying them, thereby improving knowledge retention and fostering a deeper appreciation for the subject. Didactic games not only make the learning process engaging and interactive but also help students comprehend chemistry concepts in a practical setting. These games enhance students' cognitive development and stimulate their interest in chemistry. The fundamental concepts of chemistry include terms such as "substance," "element," "compound," "mixture," "atom," and "molecule." To effectively explain these concepts to students, the following didactic games can be applied: Students are provided with a Periodic Table and asked to identify a specific element. Each correct answer leads them to a new concept, cards with the properties of elements or compounds are used, and students must correctly match them together. Students must correctly connect concepts to navigate their way out of the maze. To understand the principles of chemical reactions, students identify the sequence of transformations occurring in a reaction, each card contains a question or concept, and students must find the correct answer to complete the card [2].

Conclusion. Using didactic games in teaching basic chemistry concepts significantly enhances student engagement and learning outcomes. Traditional teaching methods, while informative, often fail to capture students' interest and encourage deep learning. Didactic games bridge this gap by providing an alternative, interactive approach that makes chemistry more accessible and appealing. These games promote active participation, problem-solving, and collaboration among students, transforming the classroom into a dynamic learning environment. Moreover, the application of didactic games fosters the development of essential life skills such as teamwork, analytical thinking, and decision-making. By incorporating these methods, educators can create a more student-centered learning experience where students take an active role in their own education. As a result, chemistry lessons become not just about acquiring theoretical knowledge but about exploration, discovery, and application.

Ultimately, integrating didactic games into chemistry education can contribute to a more effective and enjoyable learning process. By leveraging gamification strategies, teachers can foster curiosity, motivation, and a deeper understanding of scientific concepts, preparing students for future academic and professional success. Therefore, didactic games should be considered an indispensable part of modern chemistry education, aligning with contemporary pedagogical trends that emphasize interactive and student-centered learning. This article explores the importance of using didactic games in teaching fundamental chemistry concepts. The application of various game methods aims to enhance students' interest in lessons, ensure active participation, and improve the effective assimilation of chemistry knowledge. The use of interactive methods in modern education is crucial for improving teaching quality. Didactic games, particularly in chemistry, are relevant as they encourage student engagement and provide a practical learning approach. This article introduces an approach to teaching fundamental chemistry concepts through didactic games. Various types of didactic games and their implementation strategies are presented with concrete examples.

References

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