

ORGANIZATION AND IMPLEMENTATION OF LABORATORY WORKS IN CHEMISTRY FOR 8TH GRADE

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This article explores the significance of using didactic materials in the organization and implementation of laboratory work in 8th-grade chemistry lessons. The role of laboratory work in promoting active learning and fostering experience-based thinking among students is analyzed. The article provides insights into the academic impact and practical benefits of supporting laboratory work with didactic materials. Laboratory work is an integral part of chemistry education and plays a crucial role in enabling students to engage in active learning. However, for this instructional process to be effective, experts emphasize the importance of using didactic materials. These materials offer a methodological approach that ensures laboratory work is conducted in a structured and flexible manner. They enhance students' engagement in the experimental process, increase comprehension speed, and raise interest in laboratory experiments [1].

This article examines the role of didactic materials in organizing laboratory work, improving lesson quality, and fostering students' scientific research skills. Furthermore, the influence of these materials on making laboratory work more results-oriented is evaluated. The objective of this article is to examine the role of didactic materials in the organization of laboratory work in 8th-grade chemistry lessons and to assess their impact on students' knowledge and skill development. The study evaluates the effectiveness of experience-based learning methods and analyzes the application of modern didactic materials to enhance laboratory activities and ensure better learning outcomes. Laboratory work is a fundamental component in developing students' experience-based learning and thinking skills. Chemistry, being an experimental science, requires practical activities to facilitate the understanding of abstract concepts. Didactic materials contribute to the comprehension of laboratory work and simultaneously increase students' interest in chemistry [2].

Modern approaches. Combining traditional hands-on experiments with digital simulations and virtual labs to enhance students' conceptual understanding and engagement. Encouraging students to ask questions, design experiments, and develop hypotheses before conducting laboratory work, implementing competitive and game-based activities in laboratory settings to increase student motivation and participation. Integrating AR and VR technologies to provide immersive laboratory experiences that enhance practical skills and theoretical understanding, encouraging teamwork and peer discussions during laboratory exercises to promote a deeper comprehension of chemistry concepts. Innovations: Application of interactive and modern didactic materials in laboratory work organization, integration of digital laboratory simulations into chemistry lessons. Implementation of experimental methods and problem-solving practical exercises in the curriculum, adoption of new assessment approaches and rubrics for laboratory work [3, 4].

Conclusion. Research findings indicate that the use of didactic materials enhances the efficiency of laboratory work, increases students' learning motivation, and helps them develop a deeper understanding of chemistry. The structured application of laboratory work improves the quality of experimental experiences and fosters students' practical skills. The integration of interactive and modern technologies in education further improves laboratory outcomes and contributes to the overall effectiveness of chemistry teaching. Incorporating modern approaches such as blended learning, gamification, and virtual reality can further revolutionize laboratory education, making it more engaging and effective.

References

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