

Teaching Methodology of Physics in Secondary Schools

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Abstract: This article presents cases related to the teaching of physics in general secondary schools in various easy-to-use teaching methods and teaching processes related to methods.

Keywords: teaching, display, experience, metod, integrating, problem, expertise.

INTRODUCTION

Physics plays a significant role in the study of natural knowledge. Physics plays an important role in developing the understanding of nature among high school students. The relationship between physics and other sciences makes the topics understandable, clear, and simple. It fully explains the essence of physical laws and quantities. In physics lessons, students acquire the necessary practical knowledge and skills about nature. It follows that the role of other sciences in the study of physics is important.

The methodology of teaching physics in secondary schools aims to help students understand physical laws, theories, and their practical applications. The process involves the following methodological approaches and techniques:

1. Applying Didactic Principles. Scientific Approach: Delivering accurate and scientifically grounded information in physics lessons. Consistency and Systematic Approach: Teaching topics in a logical sequence, ensuring they are interconnected. Relevance to Real Life: Explaining physical phenomena and laws using examples from everyday life.
2. Teaching Methods. Traditional Methods: Lectures, discussions, and the use of textbooks and visual aids. Practical Activities: Conducting laboratory experiments to enhance students' hands-on knowledge. Interactive Methods: Problem-based learning, group activities, and project-based tasks to make lessons engaging.
3. Use of Visual Aids. Utilizing laboratory equipment, graphs, diagrams, and multimedia technologies during experiments. Demonstrating phenomena through virtual labs and simulations.
4. Integrating Modern Technologies. Information and Communication Technology (ICT): Using e-books, presentations, and online resources. Multimedia Tools: Employing video lessons and animations to explain complex processes.
5. Assessing and Reinforcing Knowledge. Evaluating students' knowledge through tests, quizzes, and laboratory assignments. Encouraging students to conduct independent research and experiments.
6. Teacher's Expertise. Teachers must possess modern pedagogical skills, deep knowledge of the subject, and effective use of teaching aids. Adopting an individualized approach by considering the unique abilities of each student.
7. Problem-Based Learning. Presenting students with various problem-based questions to encourage independent problem-solving. Training students to think critically, analyze physical phenomena, and draw conclusions. The primary goal of teaching physics is to develop students' scientific

worldview, enhance their analytical thinking, and equip them with technical knowledge for practical application in daily life.

Conclusion.

In conclusion, I can say that physics can be taught easily in different ways. For example, demonstration, presentation, experience, etc. It is more effective to explain the lesson through the method of experience and demonstration, because a person has the ability to remember what he sees and the event more than what he hears. Therefore, we try to teach the lesson through the demonstration method, using slides, small videos, and pictures. These methods are effective not only for physics, but also for all sciences and elementary school students

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