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METHODOLOGY FOR THE EFFECTIVE ORGANIZATION OF MATHEMATICS LESSONS IN GENERAL SECONDARY SCHOOLS

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Abstract: Mathematics lessons serve to form not only theoretical knowledge but also practical skills. This article describes the main methodological approaches to the effective organization of mathematics lessons in general secondary schools, the application of a competency-based approach, and the possibilities of using interactive tools. Connecting lessons with real-life examples helps students gain a deeper understanding of the subject.

Keywords: mathematics lesson, methodology, competency-based approach, interactive methods, educational process.

МЕТОДИКА ЭФФЕКТИВНОЙ ОРГАНИЗАЦИИ УРОКОВ МАТЕМАТИКИ В ОБЩЕОБРАЗОВАТЕЛЬНЫХ ШКОЛАХ

Аннотация: Урок математики служит формированию не только теоретических знаний, но и практических навыков. В данной статье описаны основные методические приемы эффективной организации уроков математики в общеобразовательных школах, применение компетентностного подхода и возможности использования интерактивных средств. Связь уроков с жизненными примерами помогает учащимся глубже усвоить тему.

Ключевые слова: урок математики, методика, компетентностный подход, интерактивные методы, учебный процесс.

Introduction

The process of learning mathematics consists of more than just memorizing numbers and formulas. It provides students with logical thinking, problem-solving abilities, and skills for calculating everyday issues. Therefore, the effective organization of lessons plays a crucial role in strengthening students' knowledge and increasing their interest in the subject.

Effective lesson organization is based on the following principles: taking into account the individual characteristics of students, connecting the topic with real-life examples, applying a competency-based approach, and implementing interactive methods.

Main Body

1. The Competency-Based Approach

The competency-based approach teaches students not only to memorize theoretical knowledge but also to apply it in real life. For example:

Linear Measurements: "Measure the distance from school to your home in steps and express it in kilometers." This task allows the student to use units of measurement in a real-world context.

Mass and Economic Calculation: "Which is more cost-effective at the store: 500 grams or 1 kilogram of cookies?" Through this problem, the student develops economic skills.

2. Interactive and Visual Methods

Interactive methods and visualization play an important role in the effective organization of mathematics lessons:

Learning topics such as units of measurement, scale, volume, and capacity through virtual laboratories using Khan Academy and PhET Simulations.

Reinforcing concepts through the use of diagrams, tables, drawings, and animations.

3. Benefits of Connecting to Real-Life Situations

Mathematics lessons become more effective when linked to real-world examples:

Problems involving car fuel consumption, the water volume of an aquarium, or measuring household furniture.

Students learn to apply knowledge in practice by solving problems based on real situations from their own lives.

4. Differentiated Approach

Adapting the lesson according to the individual characteristics of students:

Short, simple examples and visual aids for struggling students.

More complex, practical, and research-based assignments for advanced learners.

Lesson Organization Tools

Textbooks and methodological manuals (advanced lesson plans).

Online platforms: Khan Academy (uz), PhET Simulations.

Multimedia tools: presentations, video lessons, and animations.

Practical exercises and laboratory work.

Conclusion

In summary, the effective organization of mathematics lessons in general secondary schools serves to apply students' knowledge and skills to practical life, develop their competencies, and increase their interest in the subject. By utilizing a competency-based approach, interactive methods, and real-life examples, lessons become significantly more effective and engaging.

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