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EFFECTIVE METHODS FOR TEACHING THE PERIMETER OF TRIANGLES AND QUADRANGLES IN MATHEMATICS LESSONS

Tursunqulova Odina Alisher qizi
Student, University of Science and Technology

Abstract
This article provides a scientific and methodological analysis of effective methods for teaching the perimeter of triangles and quadrilaterals in mathematics lessons. The study reveals the pedagogical possibilities of using visual, practical, and interactive methods in forming the concept of perimeter. The effectiveness of game technologies in developing students' logical thinking and practical skills is also substantiated.

Keywords: Perimeter, triangle, rectangle, geometric concepts, methodology, interactive methods, didactic games, mathematical thinking.

Introduction

Improving students' mathematical literacy is considered one of the important tasks in the modern education system. In primary and secondary grades, teaching geometric concepts, particularly the concept of perimeter, plays a crucial role in developing students' logical thinking. Perimeter is the sum of the lengths of all sides of a geometric figure, and it is widely used in practical life.

The concept of perimeter is one of the important categories of mathematical science and serves as the primary theoretical foundation for studying the properties of geometric figures. Specifically, if the perimeter of a triangle is determined by the sum of the lengths of its three sides, then the perimeter of a quadrilateral is defined by the fact that it is equal to the sum of the lengths of all its sides.

Mastering this concept requires students to acquire knowledge of units of length measurement, perform arithmetic operations accurately and correctly, particularly

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the addition operation, and form geometric representations. Therefore, it is pedagogically expedient to organize the process of teaching the concept of perimeter based on a consistent, step-by-step, and systematic approach.

Visual methods are considered one of the important didactic tools that help students perceive geometric shapes more accurately and perceive them consciously. Using color drawings, diagrams, diagrams, and three-dimensional models, the sides of triangle and quadrilateral shapes, their lengths, and their relative positions are clearly depicted. In particular, highlighting the sides of a shape using different colors draws students' attention to important elements and facilitates the understanding of the concept of perimeter on a visual basis. At the same time, the dynamic demonstration of geometric shapes through interactive boards and digital presentations increases students' interest and has a positive impact on the development of their spatial imagination.

Practical sessions provide a direct activity-based approach to reinforcing the concept of perimeter. In this process, students independently measure the sides of geometric figures using a rope, tape, ruler, or other measuring tools and determine the perimeter by calculating their sum. For example, determining the perimeter by rotating a thread around a given shape and measuring its length allows students to understand the topic based on real-life examples. Additionally, students' activity increases through various practical tasks such as creating shapes, cutting them, and reassembling them.

Such an approach not only forms students' computational skills but also develops their ability to think independently, analyze, and draw conclusions. As a result, the harmonious use of visual and practical methods contributes to a deep and stable mastery of the concept of perimeter.

Interactive methods increase students' activity in the lesson. Through methods such as "Brainstorming," "Cluster," and "Question-answer," students firmly master the concept of perimeter.

Through game technologies, students explore the perimeter in an engaging way. For example, games such as "Who Finds the Fastest?" and "Fill out the Form" reinforce students' knowledge and increase their interest.

In the modern education system, digital technologies are gaining significant importance as an integral component of the educational process. In particular, the

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effectiveness of teaching geometric concepts, including perimeter, can be significantly increased through the use of interactive whiteboards, mobile applications, and 3D visual aids. Such technologies allow students to observe shapes dynamically, measure their sides, and immediately analyze the results. As a result, students' interest in the topic increases, and the process of acquiring knowledge becomes more interactive and effective.

At the same time, the interdisciplinary integration approach is also an important factor in the deep mastery of the concept of perimeter. For example, in labor education classes, students combine theoretical knowledge with practical activity by constructing various geometric figures, measuring their sides, and calculating their perimeter. This ensures the stability of acquired knowledge and forms skills for its application in real-life situations.

In conclusion, the integrated use of visual, practical, and interactive methods in the process of teaching the perimeter of triangles and quadrilaterals significantly increases educational efficiency. These approaches serve the conscious and stable assimilation of geometric concepts by students, as well as the development of their logical and spatial thinking. At the same time, the use of didactic games and modern digital technologies increases students' interest in the lesson, activates learning activities, and ensures the firm assimilation of knowledge. As a result, the widespread introduction of innovative and integrated approaches in mathematics lessons appears as a pedagogically justified and expedient direction.

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