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THE SIGNIFICANCE OF GEOMETRIC MATERIAL IN THE CONTEXT OF JUNIOR SCHOOLCHILDREN'S LOGICAL SKILLS FORMATION

Abstract. The report identifies the problem urgency; the essence of the concept of "logical thinking" has been revealed; the semantic line "Geometric figures" has been characterized, it has been determined that one of the effective means of forming logical skills of junior schoolchildren is the use of geometric material in mathematics lessons.

Key words: logical thinking, junior schoolchildren, primary school, geometric material, mathematics lessons.

In recent years, our society has undergone radical changes in perceptions of primary education goals and ways to implement them. Primary school transition to the conceptual foundations of the State Standard of Primary Education implementation is associated with bringing the education system in line with trends in modern post-industrial information society. It is a question of transition from training as process of knowledge, abilities and skills formation provided by traditional programs, to the organization of educational process on a competence-activity basis, i.e. active creative work on educational tasks which purpose is concrete educational results.

The foundation of junior schoolchildren's mental development is laid during the studying period in primary school: the necessary conditions are created for the student's formation who is able to think independently, adequately evaluate their actions, competently compare, suggest other ways to solve the problem. The child

learns to evaluate them and choose the most rational, determine the main thing and draw conclusions, and, ultimately, apply the knowledge in practice. The most important factor necessary to achieve the above results is the development of the younger student's logical thinking, which allows to ensure the effectiveness of their studies at school, success in vocational education and later life.

Logical thinking is based on analysis, synthesis, comparison, generalization and other mental operations. Teaching a student to think, prove, draw conclusions is impossible if he does not have these logical operations. Therefore, it is necessary to build the educational process in such a way that it stimulates logical skills formation, causes children to understand the mechanisms of their own logical thinking, the need for their development. This requires special work on the formation of students' mental activity.

One of the effective means, in our opinion, is the use of geometric material in mathematics lessons in primary school. The world, which surrounds a person from birth, is three-dimensional, the ideal images of which are spatial forms and relationships embodied in various geometric shapes. The processing of geometric figures in space is based on emotional and figurative thinking, which is organic for junior schoolchildren, and therefore occupies an extremely important place in their full intellectual development.

However, the analysis of typical educational programs indicates that the semantic line "Geometric figures" is given much less attention compared to the arithmetic material. This semantic line has a propaedeutic character [2; 3]. The semantic line "Geometric figures" realizes the connection of learning with the surrounding world, because the shapes of environmental objects are images of geometric figures; to solve problems that arise in modern man's life, sometimes it is necessary to operate with geometric concepts, but most of them in primary school are introduced at the acquaintance level. This semantic line is the main in the formation of students' ability to determine geometric shapes features, including essential ones, geometric concepts definition, summarizing concepts, classification, generalization, reasoning by analogy, etc., substantiation of their own opinion.

According to M. Volchasta, the tasks of studying geometry in primary school are: clarification, deepening and development of junior schoolchildren's sensory skills in order to successfully orient in the surrounding reality; formation of visual-sensory representations of basic geometric figures and their simpler properties; initial experience formation in measuring and calculating geometric quantities; figurative thinking development; initial skills formation to reason and substantiate their actions, appropriate speech skills development related to the terms and symbols use [1].

Elementary geometric knowledge acquired in primary school, contributes to the formation of junior schoolchildren's logical skills. Primary school practice, conversations with teachers and analysis of their answers give reason to say that geometric propaedeutic study is given little time and attention. This issue needs in-depth methodological developments and refinements.

Literature

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