

CREATIVE APPROACH METHODS IN LEARNING GEOMETRIC MATERIALS STUDIED IN GRADE 3

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Abstract. This article aims to develop methods, forms, and techniques for using problem-based learning in explaining geometric concepts studied in 3rd grade, and to study its entire system.

Keywords: mathematics, skills, competence, competence, knowledge, teacher, pedagogue, development, activity centers Developing elementary mathematical concepts in preschool children through various forms of work.

Geometric material is not highlighted in the program as an independent section in the teaching process. Issues with geometric content are always considered, whenever possible, in close connection with other issues of the course. However, as indicated in the explanatory note to the program, when presenting geometric issues, it is necessary to adhere to the personal logic subordinated to the goals of including this material in the course material.

These goals are primarily to develop children's spatial imagination, to form in them an idea of \u200b\u200ba geometric figure (point, straight and curved line, straight line segment, curved line, right angle and non-right angle, rectangle, circle, and sphere). Children should be able to recognize, distinguish, describe each of these figures, both when they stand alone and when a familiar figure is part of another figure, and learn to make another figure from several given figures. Geometric material plays a large role in the program. In connection with the expansion of the volume of geometric material, the importance of laboratory work has also increased. The preparation of geometric concepts and their drawing (first on checkered paper, then on unlined paper), the formation of a rectangle by folding a sheet of paper and making models, exercises on finding the shape of certain geometric figures from surrounding objects and drawings are carried out in a system of special exercises and other work aimed at developing the skills of working with the most commonly used measuring instruments in children - a ruler, a ruler, a compass, a tape measure. All these works are more in line with the requirements of geometric and elementary

mathematics. Students should familiarize themselves with some of the properties of the figures being considered on the basis of practical work, and know in advance. All this is of great importance in increasing the polytechnic knowledge of students.

The most important task of the teacher is to develop a methodology that will reveal the content of geometric material to the level that students should achieve by the time they enter the 5th grade, as well as to determine the leading directions for studying this material.

The system of studying geometric material in elementary grades consists of the following:

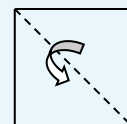
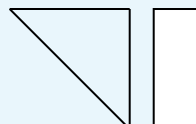
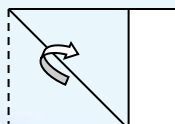
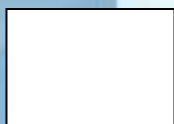
1. Problems using geometric figures (circles, polygons, polygon elements) as objects of calculation. In solving these types of problems, the necessary terms are mainly mastered.
2. Problems related to the formation of ideas about geometric quantities (length, area) and skills in measuring sections and faces of figures.
3. Problems on finding the perimeters of polygons, the area of a right rectangle.
4. Problems on elementary exercises with figures given by their parameters (right triangle, right rectangles with given sides, etc.).
5. Problems on elementary construction of geometric figures on checkered paper, smooth paper without lines using a ruler, a ruler (without taking into account dimensions).
6. Problems on dividing figures into classes.
7. Problems on dividing figures into parts (including equal parts) and problems on constructing from other figures.
8. Problems related to the formation of basic skills in reading geometric drawings using letter symbols.

9. Problems related to determining the geometric shapes of objects or their parts.

Problems aimed at the formation of basic geometric concepts and skills, that is, problems that combine didactic and knowledge-requiring functions, form the basis of the groups of problems identified above.

In teaching mathematics in primary grades, the formation of students' geometric ideas, the application of knowledge, skills and abilities in practical implementation of geometric problems is one of the tasks included in the state educational standard and curriculum for primary education. It can be seen that students often make mistakes when completing geometric tasks. The reason for this is the teacher's inability to properly use teaching principles in the process of completing geometric tasks. In this regard, we give some methodological recommendations for future primary school teachers.

1. Know the system of geometric materials studied in accordance with the requirements of the primary school curriculum and state educational standards and organize the educational process based on this. Each primary school teacher must know the structure of geometric materials studied in primary grades and organize teaching based on this. In primary grades, practical methods are widely used in the transfer of geometric concepts. In particular, as a result of practical work such as drawing, cutting, folding, making, painting, educational tasks are completed. Consider the following task: Make a square from a rectangular sheet of paper. This task is carried out through practical work. A rectangular sheet of paper is folded so that one side falls on the other side. As a result, a trapezoidal figure is formed. The excess rectangular part is cut off, leaving the triangular side, and when the sheet is opened and viewed, a square is formed. These tasks can be shown in the following drawings.



2. It is advisable to teach educational materials using educational principles, taking into account that geometric concepts are formed inductively in the minds of students.

The rational use of the principles of clarity, awareness, systematicity, transition from easy to difficult, from simple to complex, and the principles of providing knowledge to students taking into account the age and individual characteristics of the student by the teacher increases the quality and efficiency of education. Of course, the above-mentioned educational principles are applied in the process of learning almost every geometric concept. However, some of them serve as the main principle in teaching the geometric concept being studied. Each geometric concept is taught based on the principle of complementarity, taking into account that it will develop and improve in the future.

3. When choosing learning tasks in geometric content taught in grade 3, using didactic materials in a fully purposeful manner provides ample opportunity for mastering concepts in geometric content. The teacher should be able to correctly select didactic materials so that it is easy for the student to understand, having studied and analyzed textbook-based notebooks and other didactic materials, as well as teaching aids, and appropriately using teaching principles such as systematicity, complementarity, awareness, and instruction.

Since the choice of textbooks and printed notebooks and didactic materials is at the discretion of the teacher, the teacher selects educational materials based on the purpose of the lesson and taking into account the individual characteristics of the students' age and the level of knowledge of the students in the class. It should be noted that the same educational material can provide students with knowledge and skills by applying different teaching principles in different classes. In this case, it is appropriate for the teacher to use educational principles appropriately. This is inextricably linked to teaching methods. If the teacher knows how to organize the teaching process using verbal, instructional and practical teaching methods in their place and in an appropriate manner, the educational effect will be high. Experience shows that

organizing the educational process using modern pedagogical technologies leads to the rapid formation of knowledge, skills and abilities by students and increases the effectiveness of education.

4. When performing geometric learning tasks taught in grade 3, the appropriate use of forms of organizing student learning activities such as general class work, group work, and individual work and the ability to properly ensure the continuity of these activities play an important role in the educational process. In practice, most teachers use general class work and individual work more often. In practice, we have observed that students' group work is carried out with interest by students. Geometric learning tasks are assigned to designated groups. The group brainstorms about this task in a team. Each team member gives his or her own opinion on this issue. After the correct conclusion is determined, the task completed by the team is checked by the teacher, and then this conclusion is clarified in a whole-class discussion. Here, the balance of general class work, group work and individual work activities in organizing student learning activities is established. Depending on the form of the educational task in geometric content, different forms of organizing student learning activities can be seen in different proportions. It is advisable for the teacher to use optimal methods of this balance in order to increase the effectiveness of education.

5. In the process of teaching geometric material, the teacher should pay special attention to the independent work of students in applying educational principles. In particular, attention should be paid to the independent formulation and solution of tasks in geometric content by students.

One of the important tasks of the teacher is to correctly use independent work, which is a productive method of teaching for the conscious completion of tasks related to the mastering of geometric concepts, construction, construction of geometric shapes, finding and separating shapes, classifying shapes, dividing shapes into parts and constructing new figures from these parts, forming ideas about geometric figures, and calculating tasks.

One of the important requirements is that the independent work given to the student must be within the student's power, understandable to the student, and consistent with the curriculum. Of course, the student's independent work must be supervised and evaluated by the teacher.

6. Teaching students the practical application of geometric concepts studied in the primary school, especially in the 3rd grade, is an important task for the teacher. The student should know where each geometric concept being studied is applied in life, in practice. Because many life and practical problems are rooted in geometric learning tasks. For example, many problems related to finding the area of a figure and the volume of an object are among them. Whether in construction, landscaping, or farming, in the national economy, it is necessary to solve problems with geometric content. Geometric concepts learned in elementary grades serve as a basis for studying a systematic geometry course in the future. From elementary grades, students learn to solve practical geometric tasks, and their geometric imagination is formed, and their skills in solving practical geometric problems are formed.

7. It is advisable to pay special attention to students' self-control in the process of studying geometric materials. When a student completes a geometric learning task, he should know that it is necessary to check the correctness of this task in various ways. Through self-control of students, the formation of geometric concepts in mathematics is carried out. A first-grader, while studying concepts such as a triangle, a rectangle, a pentagon, will find out why they are called that way, whether they are called polygons based on the number of angles in them or based on the number of sides. Or a third-grader, having solved a problem on calculating the area of a regular rectangle, will re-solve the learning task based on the rule that the area of a regular rectangle is equal to the product of its width and height, and will find out whether the problem was solved correctly. The advantage of teaching students to self-control is that the student learns to control and re-control his activities. The student also learns to analyze the task completed by the student standing next to him or another student.

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