

# METHODS OF TEACHING MATHEMATICS IN PRIMARY EDUCATION

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## Abstract:

Abstract: The article discusses ways to improve the effectiveness of mathematics teaching in elementary grades based on the resources that students can learn from. At the same time, the effective use of several methods is shown as an example.

**Keywords:** method, discussion, explanation, induction, deduction, analogy, analysis, synthesis, comparison, problematic, explanatory, illustrative, reproductive.

## BOSHLANG'ICH SINFLARDA MATEMATIKA O'QITISH METODIKASI

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## Annotatsiya:

Maqolada boshlang'ich sinflarda matematika fanini o'quvchilar bilim oladigan manbalar bo'yicha o'qitish samaradorligini oshirish usullari haqida fikr yuritilgan. Shuning bilan birga **bir nechta usullarni samarali qo'llash misol tariqasida ko'rsatilgan.**

**Kalit so'zlar:** metod, suhbat, tushuntirish, induksiya, deduksiya, analogiya, tahlil, sintez, taqqoslash, muammoli, izohli, illyustrativ, reproduktiv.

It is known that the issue of teaching methods, their systematic enrichment and updating is one of the most important aspects in achieving high results in teaching and the education system in general. Learning and teaching methods are methods of joint activity of the teacher and students, with the help of which new knowledge, skills and abilities are gained. The ability and thinking of teachers will develop. Therefore, enriched teaching methods based on the advanced achievements of modern science and technology and information technologies are of great importance in increasing the effectiveness of education.

In order to consciously choose from the teaching methods available in practice today, the ones that correspond to the new content and new tasks of education, it is necessary to first look at the classification of all teaching methods and existing teaching methods.

Teaching methods involve organizing, encouraging and controlling the joint activities of teachers and students. Therefore, they are divided into three groups:

- methods of organizing educational activities;



- methods of stimulating educational activities;
- methods of controlling the effectiveness of educational activities.

Methods of organizing educational activities are divided into several groups, these are:

1. According to the sources from which students learn: oral, instructional, practical methods.
2. According to the direction of the student's thinking: induction, deduction, analogy.
3. The level of pedagogical influence management, according to the level of independence of students in their studies: the method of educational work performed under the leadership of the teacher and the method of independent years of students.
4. According to the level of students' independent activities: explanatory-illustrative, reproductive, method of enigmatic presentation of knowledge, partial search and research method.

Now let's analyze separately the group divided by the sources from which students get knowledge. It is known from the above that these consisted of oral, instructional and practical methods.

Oral methods provide the most information in terms of volume in a short period of time, put puzzles in front of students, help them find ways to solve them, and generally develop the student's ability to work verbally. allows. These methods create unique conditions for the development of students' thinking. If we consider them separately, that is, oral methods:

A) Explanation. The method of explaining knowledge is that the teacher explains the material, and the students receive the knowledge ready. The description of the educational material should be clear, understandable and short. The method of explanation is used to introduce theoretical materials in the form of information, to give instructions to students on the use of educational tools.

It is necessary to explain a number of problems of the elementary mathematics course by the method of oral explanation. Modern information technologies and special gadgets can also be intelligently used in the oral explanation method, which can greatly help students to imagine and understand mathematical figures.

For example: in the 5th general education school of Gulistan city, Syrdarya region, when explaining the triangle, the teacher uses triangles of different shapes, colors and sizes cut from paper. All these figures are triangles, although they differ from each other in form and appearance, but they are all called triangles in mathematics. A triangle has three points, three sides, and three angles. It is appropriate to explain that the tip of a triangle consists of a point, and a side of a cross section, and its angle by cutting off one of the angles of the triangle.

B) Conversation. It is one of the most common and leading teaching methods, and can be used at different stages of the lesson, for different purposes, that is, it can be used to explain, consolidate, repeat new material, check homework assignments, and independent work. possible

Conversation is a question-and-answer method of teaching, in which teachers ask students about educational and educational issues by means of a system of specially selected questions and answers based on the students' knowledge acquisition and practical experience. leads to a solution.



In teaching, catechetical and heuristic types of conversation are used. A catechetical conversation is structured on the basis of such a system of questions that require simple recall of previously acquired knowledge and definitions. This mainly involves checking and evaluating knowledge, strengthening new materials, and repeating. The teacher does not give ready-made knowledge to the students, but through the questions, he leads them to come to new concepts and conclusions based on their previous knowledge and observations.

For example: the interview method that can be used to teach the multiplication table in the 40th general education school of Boyovut district, Sirdarya region, that is, how to know how much the multiplication is equal to  $3 \times 5 = 15$ ? How to know the division of  $6 \times 5 = 30$ , such as  $30:6$  or  $30:5$ ? Using subtraction  $60-24$  yields subtraction  $70-18=(70-110)-8=60-8=52$ .

In order to activate students' thinking, the questions asked should compel them to compare, contrast, separate or group events and evidence, and look for connections between them. The following questions invite just that: "Why?", "What does this mean?", "How can it be done differently?", "How should this be understood?" and so on.

C) Story. The teacher can explain knowledge in the form of a story (tale). It is mainly used to provide information about the development of the history of mathematics, the development of measurement systems, and other information related to the history of mathematics.

If the given story involves the events, elements and issues that the child encounters in everyday life, its effectiveness will certainly be high.

G) Pupils work with books. This is one of the manifestations of oral teaching methods. In the textbooks and manuals, a systematic course of the fundamentals of science is described, and material is provided for students' independent work. Work with textbooks and books is carried out at all stages of the teaching process, but this work requires certain skills from students and the help of the teacher. Depending on their reading skills, it is necessary to involve students in independent reading of the text given in the book.

For example. There was a family in a small village: father, mother and two daughters. The older girl's name is Uzunkhan and the younger girl's name is Kurukhon. In fact, the original names of the girls are Nilufar and Shahista, and because of an incident that happened in the recent past, they got the names Uzunkhan and Kurukkhan for themselves. So, one day Nilufar and Shahista's mother ordered them to deliver the somsa she had cooked to their grandmother who lived in the neighboring village. Then the girls got into an argument and the argument got richer: who will go to his grandmother's house faster by which way? Since Shahista walked along the road leading to the bridge built over the stream, he took 150 steps to his grandmother's house and reached his grandmother's house in an instant, while Nilufar took a total of more than 300 steps to his grandmother's house because he went along the big asphalt road. has arrived. After that, when the family members met each other, they jokingly called the girls Uzun Khan and Kuruch Khan.

In mathematics, reading text or problem text is new and somewhat difficult for students to understand, so it is necessary to check what the student has read in the textbook. It is necessary to pay attention to reading the instructions given in the textbooks before each exercise. In the teaching of mathematics, the reading of pictures, drawings and schemes of students is of great importance in enriching their competence, in particular, the competence of understanding the



mathematical writings that make up the main content of the textbook. At the end of the work, it is necessary to use the opportunities that the textbook opens for independent acquisition of new knowledge with the help of pictures, drawings, verbal expressions, mathematical writings. D) Guided methods. This method of teaching allows students to gain knowledge based on observations.

Observation is a manifestation of emotional thinking, and it is necessary to use it widely and effectively in elementary grades. Objects, phenomena and their various models, instructional manuals in different languages are objects of observation. Instructional methods of teaching cannot be separated from verbal methods of teaching. Demonstration of instructional manuals should always be accompanied by explanations by the teacher and students.

According to the teacher, four main forms of joint use of instructional tools were identified (Fig. 2). It is effective to rely on students' perceptions on the one hand, and on their imaginations on the other hand, in the implementation of the visual method in mathematics lessons.

The correct use of instructional methods in mathematics lessons allows for the formation of meaningful concepts of quantitative concepts, develops logical thinking and speech, helps to come to generalizations that are later used in practice based on the observation and analysis of specific events.

Ye) Practical methods. Methods related to the process of formation and improvement of qualifications and skills are practical methods. It can include written and oral exercises, practical laboratory work, and some types of independent work. Exercises are mainly used as a method of strengthening and applying knowledge.

An exercise is a systematic repetition of an action in order to master or strengthen it. Exercises are used to develop numeracy skills, calculation skills and abilities, and arithmetic problem solving skills.

Exercises should be used in a specific system following the principle of transition from light to complex. Exercises should develop students' independence in preparation, practice and creative exercises. In order to strengthen this or that action, method, problem solving, preliminary exercises are performed under the guidance of the teacher. The teacher provides one or another help to the students for some time. After that, it is advisable to perform the exercises independently. Creative exercises include solving problems and examples in different ways, creating a problem based on an expression, creating a problem according to a short writing scheme, and solving problems related to perception and enigmatic nature.

Practical and laboratory work is fully used to introduce quantities and their measurement. Carrying out practical and laboratory work allows students to actively acquire knowledge, skills and abilities, elements of independent judgment and conclusions develop research skills, enrich students' imagination and expand their knowledge. That is why practical and laboratory work is one of the effective methods of teaching. Based on the experience of organizing mathematics lessons in elementary schools of Syrdarya region on the basis of modern pedagogical technologies and based on our research, we offer the following in this direction:

- the teacher must have basic knowledge about modern pedagogical and information technologies, and must constantly work on himself methodologically in this field;



- multimedia and distribution materials used in the subject of mathematics should meet the requirements and be of sufficient size based on the needs of the students;
- in each lesson, using didactic games that are close to each other in terms of content, adding some new elements, paying attention to the correct interpretation of the conditions of didactic games.

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