



## **Development Of Logical Thinking Of Primary School Students**

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**Abstract:** the article talks about ways to develop logical thinking of elementary school students.

**Key words:** mental activity, volitional development, thinking, spatial imagination, activity, mathematical sophorisms, geometric figures.

## **Boshlang'ich Sinf O`Quvchilarning Mantiqiy Fikrlashga Bo'lgan Tafakkurini Rivojlantirish**

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**Annotatsiya:** maqolada boshlang'ich sinf o`quvchilarning mantiqiy fikrlashga bo'lgan tafakkurini rivojlantirish usullari haqida gap borgan.

**Kalit so'zlar:** Aqliy faoliyat, irodaviy rivojlanish, tafakkur, fazoviy hayol, faollik, matematik soforizmlar, geometrik oyinlar.

In order to form the mathematical thinking of elementary school students, it is appropriate to use interesting mathematical games, mathematical games, puzzles, geometric problems and exercises, difficult arithmetic problems, funny problems, and riddles in riddles with mathematical content as a tool. Mathematical games help enrich students' knowledge and develop their mental activity. Mathematical games and other games have their own characteristics, conditions that make students think, and their curiosity helps students to develop their intellectual and creative abilities. Interesting mathematical games are considered to be a tool that has a comprehensive effect on the development of students' thinking, with the help of which mental and willful development is



carried out. Spatial imagination, goal-oriented mathematical thinking and goal-orientedness, independent search and finding of ways of actions to solve practical tasks, all these are required for successful mastery of mathematics. As soon as the child steps on the threshold of school, he does not lose his interest, he takes revenge on the game as before. Even interesting issues arouse activity in children and develop thinking. We encountered such situations in elementary math classes. In these lessons, students are recommended to solve problems about numbers, mathematical sophisms, puzzles, problems, poems, jokes. Here are some of them.

1. Issues about numbers.

a) Take three consecutive different numbers and form a set of possible two-digit numbers from it. Divide the sum of the resulting numbers by the sum of the given numbers. Your answer will be 22. For example: we take numbers 3, 4, 5. Let's create a set of possible two-digit numbers:

34, 35, 43, 45, 53, 54.

$$34+35+43+45+53+54 = 22$$

$$3+4+5$$

b) Favorite number.

One of the students is invited to tell his favorite number. He said what he wanted, i.e. the number 6. - So, what are its characteristics? - the reader is interested. If you know how amazing it is, multiply your favorite number by 9 and write the resulting number (54) as a multiplier of the following numbers 123456789.

$$12345678 * 54 = 666666666$$

c) Puzzle.

The person asking the puzzle (hour) was asked how old he was. His answer was thought-provoking. Subtract three times our age three years ago from three times my age in three years, and you will get my age, he replied. Solution: Denote the sought number by  $x$ , then the age after 3 years will be  $x+3$  and the age 3 years ago will be  $x-3$ . As a result, we get the following equation:

$$3(x+3)-3(x-3)=x$$

$$3x+9-3x+9=x$$

$$X=18$$

So, he is 18 years old. All mathematical games are based on some mathematical theory. They develop children's thinking and increase their activity in the exercise of studying abstract concepts of students. Because in them, the speed





of verbal calculation, the sharpness of the sense of competition, and the desire to reach the goal in the most correct way are clearly visible. In mathematics, the game increases his interest in science, which makes him always want to do it seriously.

In order to form the mathematical thinking of elementary school students, educational methods that increase their activities and strengthen their acquired knowledge, which help them to consciously acquire mathematical knowledge, and cultivate independent work skills, such education should be highly developed. Another technique is generalization.

The teacher should make full use of every opportunity to properly form the thinking of his students:

1. To correctly describe, analyze, compare students, it is necessary to teach abstraction and generalization.
2. To explain the way to express one's opinion correctly, clearly and fluently.
3. Making independent judgments and conclusions, thinking increases students' mental knowledge, skills and abilities. In order to implement the above-mentioned tasks, first of all, it is necessary to introduce to the students the need to independently compare the objects of different districts, to find similarities and differences in them.

Mathematical thinking has the following main components:

1. Exact thinking is the object being studied using a specific module.

There are two types of clear thinking:

- a) observation, feeling.
- b) On the basis of the acquired knowledge, begin to study the connection between the object and the module.

Elementary school students gain clear thinking through observation and perception with the help of visual aids.

2. Abstract thinking - this occurs during the study of mathematics. If we consider the concept of a geometric shape as an example of the emergence of abstract thinking in a transparent and non-revealing way, then we do not pay attention to the appearance and size of this shape, but think about the properties of this shape. As an example of non-obvious abstract thinking, when we talk about the number of elements of two sets, we are not thinking about the properties of this set, but about the exact sameness of its elements. Abstract thinking can be studied in two parts.

1. Analytical thinking



## 2. Mathematical thinking

Analytical thinking occurs in the process of thinking about ways to solve a problem, solving a problem using an equation, checking the solutions of a solved problem. Mathematical thinking occurs by deriving results from problems, being able to calculate specific cases, stating a theoretically accurate result, and generalizing preliminary conclusions.

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