



## **THE ROLE OF MATHEMATICS IN ELEMENTARY CLASSES**

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### **ABSTRACT**

In this article, the role of mathematics in primary grades, Problem Solving and Critical Thinking Skills, Logical Reasoning and Communication Skills.

### **KEYWORDS**

Primary grades,  
Mathematics, structure,  
patterns, engineering,  
medicine, calculation,  
skills.

### **INTRODUCTION**

The elementary grades play a critical role in introducing students to fundamental concepts in mathematics that will serve them well for the rest of their academic and personal lives. Mathematics is a critical subject taught in elementary to upper grade levels that provides students with problem solving, critical thinking, and analytical skills. In this article, we will talk about the importance of mathematics in primary grades.

#### **1. Problem solving and critical thinking skills**

Mathematics provides a structured environment for students to develop problem solving and critical thinking skills. Elementary students learn to break problems down into smaller, manageable parts, identify patterns, and use logical thinking to find solutions. These skills help you understand how to approach problems systematically and develop a more organized approach to everyday challenges.

#### **2. Career opportunities and lifelong skills**

Mathematics is a necessary subject that allows students to explore a variety of career options, especially in the modern world we live in today. As the demand for technology and data analytics skills increases, mathematical competence is a key requirement for most jobs, including science, engineering, medicine, computing or finance. In addition, mathematics is a life skill that helps develop a person's reasoning skills, logical thinking, and problem solving skills. These skills are necessary not only for professional success, but also for everyday life.

### 3. Logical reasoning and communication

Learning mathematics builds logical reasoning and communication skills, two essential skills for personal and professional growth. Elementary students begin by learning to express their thought processes mathematically, which helps them understand and communicate complex concepts effectively. They can make logical arguments, check the validity of reasoning, form a clear understanding of mathematical concepts. Mathematics also teaches students to organize, analyze, and communicate complex information. This is a valuable skill in any profession.

### 4. Identify the sample

Mathematics helps students develop pattern recognition skills, which are essential foundations of problem solving and critical thinking. Pattern recognition involves noticing repetitions and similarities, identifying relationships between different elements, and identifying trends and connections. By applying pattern recognition to problem solving, students can better understand complex data sets and make more informed decisions.

The elementary mathematics course includes parts of arithmetical, algebraic and geometrical material. A concentric arrangement of arithmetic material is maintained in the elementary mathematics course. However, in the current program, the number of counters is reduced: tens, hundreds, thousands, multi-digit numbers. It should also be said that the material is grouped in such a large way that the interconnected concepts, actions, and issues are viewed in time. At the same time as studying the properties of arithmetic operations and appropriate calculation methods, connections between the results and components of arithmetic operations are revealed. (For example, if one of the addends is subtracted from the sum, the second addend is formed.) Changes in the results of arithmetic operations are observed when one of the components changes. The introduction of elements of algebra meets the goals of deep, understood and generalized mastery: the concepts of equality, inequality, equation, variable are revealed on a concrete basis. Starting from the 1st grade, numerical equalities and inequalities ( $4=4$ ,  $6=1+5$ ,  $25$ ,  $8-3 < 8-2$ , etc.) are considered. Their study is connected with the study of arithmetical material and helps to reveal it more deeply. Starting from the 2nd grade, equations of the form  $(x+6)-3=2$ , etc. are considered. Solving the equations is performed first by the method of selection, and then based on the knowledge of the connections between the results and components of the operations. Practical testing with a variable allows students to acquire functional imagination. Geometric material serves the purpose of introducing children to the simplest geometric figures, developing their spatial imagination, as well as showing arithmetical laws and connections. (For example, the representation of a rectangle divided into equal squares is used to reveal the permutation property of multiplication...). Starting from grade 1, straight and curved lines, cross sections, polygons and their elements, right angles and rectangles are introduced. Students should learn to imagine geometric figures, name them, and make them simple on checkered paper. In addition, they should master the ability to find the length of the section and broken line, the perimeter of a polygon, a rectangle, a square, and the face of any figure (using a palette). Concept of teaching method. The goals of teaching mathematics in elementary grades are as follows: general educational goal, educational goal, practical goal. These goals are interrelated and complement each other.

1. The educational goal requires the following from the teacher.

a) imparting knowledge, skills, and competences to students from the system of mathematical knowledge;

- b) studying the real world with mathematical methods;
  - c) to improve oral and written speech of students, to ensure its quality;
  - g) it is necessary to provide students with such knowledge in mathematics that through this knowledge, through active cognitive activities, their knowledge, skills, and abilities increase.
2. Educational purpose. It is necessary to teach students to be persistent, diligent, thorough, to be able to control their thoughts and conclusions, and especially to achieve the fluency of the opinions expressed on the basis of observation. Symbols are used in mathematics to represent relationships between quantities. This is the mathematical language that needs to be developed. The task of the teacher should be to teach to transfer the mathematical idea expressed in symbolic language to the mother tongue.<sup>1</sup>

## Conclusion

The importance of mathematics in elementary school cannot be overstated. Mathematics provides students with the problem-solving, critical thinking, analytical, and communication skills necessary for success in their academic, professional, and personal lives. By mastering the basics of math, students can gain confidence and build a foundation for future success. That's why it's so important for teachers to foster a love of math in elementary school students and equip them with the necessary math skills that will prepare them for lifelong success.

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<sup>1</sup> "Science and Education" Scientific Journal February 2021 / Volume 2 Issue 2 Shahlola Choriyevena Mirzoyeva