THE ROLE AND IMPORTANCE OF MATHEMATICS IN MODERN EDUCATION

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Annotation: In this article, the role and importance of mathematics in the modern education process, the use of new technical tools for teaching mathematics, in-depth study of mathematics and a significant degree of independence in the educational process, the purpose of using modeled programs, other teaching methods methods are described in detail.
Key words: subjects, formulas, technologies, modern science, arithmetic problems, fundamental science, idealized formulas.

Introduction:

In the school mathematics course, the simplest concepts that cannot be defined are conditionally accepted. For example, in the course of arithmetic, the concept of number and the operation of addition, and in the course of geometry, the concepts of plane, point, distance and straight line are undefined concepts. With the help of these concepts, other mathematical concepts are defined. The meaning of the word "definition" is that it means a logical method that allows to distinguish the considered concepts from others, to clarify the content of a new term introduced into the science.

Lterature analysis and methodology:

Laws, formulas and methods of mathematics are one of the fundamental sciences used in other sciences - chemistry, physics, biology and even drawing. Despite the fact that the connections and interactions of mathematical entities are abstract concepts, when they interact with other disciplines, accurate description, modeling and prediction processes begin to work, enriching mathematics with "flesh and blood".

The language of nature can be translated into the language of mathematics, the language of numbers, which helps us understand the structure and relationships of any phenomena, create models and predict their future states. It is enough to recall Einstein's contribution to science through the formulas of the theory of relativity, thanks to which we begin to learn about our Universe, and its laws are confirmed experimentally by space exploration.

Mathematical laws allow modeling any actions, predicting and calculating the results of any process using formulas. Even medicine cannot do without mathematics: except for the design of medical devices, the effectiveness of any treatment is analyzed using mathematical laws.

Thanks to mathematics, we build buildings and complex structures, explore outer space, develop various technologies, use computers and mobile phones, and even develop our culture. The role of mathematics in modern science is constantly growing. This is because, firstly, without a mathematical description of a number of phenomena of reality, it is difficult to hope for a deeper understanding and mastery of them, and secondly, the development of physics, linguistics, technical and some other sciences requires extensive use of mathematical apparatus. In addition, without the development and use of the latter, it would be impossible, for example, to conquer space or create electronic computers used in various fields of human activity.

Thanks to mathematical knowledge and skills, we solve not only arithmetical problems. This science allows you to develop the flexibility of the mind, which is necessary for the objective solution of any problem. These are not only problems of a mathematical nature, but also different life situations that require consideration "from different angles". To know the essence of the problem, it is necessary to look at it from all sides, which is possible thanks to the imagination. Mathematics is an exact science that does not tolerate mistakes. It is precisely because of this property that mathematical laws have formed the basis of all inventions, from the invention and pendulum-shaped primitives to supercomputers.

Mathematics can be divided into two complementary parts. Theoretical science deals with in-depth analysis of structures within mathematics. Applied science presents its models to other sciences. Physics, chemistry and astronomy, engineering systems, prediction and logic make constant use of mathematical apparatus. With its help, discoveries are made, patterns are found, events are predicted. In this sense, the importance of mathematics in human life cannot be overestimated.

Results:

Without knowledge of the basic mathematical laws and the ability to use them, it will be very difficult to learn almost any profession in the modern world. Not only financiers and accountants deal with numbers and operations with them. Without such knowledge, an astronomer cannot determine the distance to a star and the best time to observe it, and he cannot understand how to deal with a molecular biologist. An engineer cannot design a working alarm or video surveillance system, and a programmer cannot find an approach to an operating system.

These and many other professions simply do not exist without mathematics. Mathematics has a special place in the system of sciences. After all, he studies nature, and this gives him every reason to associate it with the natural sciences, but, unlike other natural sciences, he does not use the methods of observation and experiment, but the deductive method, which is purely speculative in nature, and this Humanities bring him closer to him.

The science of mathematics plays an important role in the development of a person's intelligence and attention, training determination and will to achieve the desired goal, ensuring algorithmic discipline and expanding his thinking. Mathematics is the basis of knowledge of the universe, and it is important for the development of production, science and technology, revealing the specific laws of surrounding events and phenomena.

Taking into account the incomparable role of mathematics in our lives, this subject is included in school textbooks from the first grade. great attention is being paid to the introduction of tools and information and communication technologies. In particular, the importance of connecting academic subjects with life, solving practical examples and problems, involving

students in independent research and learning is incomparable. In the course of the lesson, the student should not feel as if he is forced to be tied to the desk, but on the contrary, it should be achieved that he participates in the lessons with great enthusiasm and strong desire.

Discussion:

In the present era, when new technical tools, including computers and other information technologies, are rapidly entering the teaching of mathematical sciences, using the achievements of computer science in order to ensure interdisciplinary coherence is one of the urgent issues. Pedagogical, computer and information technologies are expressed in an integrated system that consists of organizing and preparing the educational process, providing scientific and methodical materials, implementing the educational process, and evaluating the quality of educational results.

Another direction of the convenience of computers in teaching mathematics is the modeling of certain learning situations. The purpose of using modeling programs is to provide comprehensibility of materials that are difficult to visualize and visualize when using other teaching methods. With the help of modeling, information can be presented to students in the form of computer multimedia in graphic mode. Therefore, they tend to study mathematics in depth and show a significant degree of independence in the learning process. With the help of modeling, information can be presented to students in the form of computer multimedia in graphic mode. Therefore, they tend to study mathematics in depth and show a significant degree of independence in the learning process.

Application of computer technology to school educational institutions opens a wide way to optimize the teaching process. In the next decade, the use of computers and new innovative modern information technologies in the teaching of mathematics in the educational system was carried out in several main directions. Modern innovative programs have been developed to help new students to independently work on mathematics, such as computer-aided assessment of knowledge, development and development of various types of educational programs, development of mathematical games related to knowledge, etc. These programs and video lessons will greatly help students to strengthen the topics taught during the lesson.

Conclusion:

In conclusion, it is worth saying that the logical rigor and rigor inherent in mathematics calls for the cultivation of a general culture of thinking. Mathematics is a fundamental science, its methods are actively used in many natural sciences such as physics, chemistry and even biology. By itself, this field of knowledge works with abstract connections and interactions, that is, with things that are not material for themselves.

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