

## Integration of Mathematics with other Sciences

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**Abstract:** This article is written about the integral relationship of mathematics with other disciplines and the importance of an integrative approach in the effective organization of lessons in this discipline. The interrelationships of mathematics and physics, the educational and methodological significance of integrative approaches were also discussed.

**Keywords:** integration, problem, classification, hyperbolic type, differential.

Everything in nature is interconnected and interconnected. This theory is also reflected in the interdisciplinary relationship. The application of mathematics to physics is divided into three main types, which differ sharply in terms of the properties of the second-order linear special product differential equations, which play an important role: hyperbolic type, parabolic type, elliptical type. Euler studied these three types of equations from the time of D'Alembert to the middle of the twentieth century. After the creation of jet planes, the problem of studying the rapid motion of gases from sound leads to mixed-type differential equations. Our scientists have studied such equations in detail, revealed their classification and canonical forms, and solved a number of problems for equations of mixed composition. They pay special attention to the application of mathematics to practical problems, the creation of mathematical models of objects related to production and environmental processes. It is also useful to provide information about mathematics scientists who have lived in our country and contributed to the field of mathematics. For example, Sirojiddinov's major research work, which spread the fame of the Tashkent School of Mathematics around the world, focused on the limit theorems of probability theory, in particular, the limit theorems for Markov chains. Sirojiddinov was the first in the history of mathematics to introduce exact estimates and asymptotic distributions in limit theorems for the sum of random quantities connected by the Markov scheme, and invented a method for obtaining such results. The method was later extended to other schools of probability theory. Sirojiddinov's work on statistical methods of product acceptance control and recommendations developed on this basis have been implemented in many enterprises. In addition to the

direct practical application of mathematics, it should be noted that it has a special role in educating the younger generation as fully developed adults. Analytical reasoning, logical observation, spatial imagination, and abstract thinking are necessary skills for all areas of human activity, which are formed and deepened in the process of studying mathematics. We have a lot of students who are interested in mathematics and want to master it. Our country has all the conditions for them to become advanced scientists, but among our young people there is an opinion that only a student who wants to become a mathematician should master it. It is the result of not being able to get out of the daily routine of today's life, of not being able to see the future. Of course, we think that the quality of education will increase if the teachers who have contributed to the development of science, along with the organization of integration lessons in mathematics in school, provide information about great people. Young learners are introduced to mathematics from the earliest days of school, and at the same time it opens the way to all disciplines. We cover mathematics in all the subjects we study. For young learners, mathematics opens the doors of knowledge to the world and can give new tasks to their learners almost every day. It is important for the teacher to take this into account in order to make interdisciplinary connections correctly. It is very easy to make interdisciplinary connections in elementary school. Because all subjects are taught by one teacher, and therefore interdisciplinary connections are opened for him. Primary school science is based on the events and happenings around it get a clear idea of the properties of  $r$ . The proud feature of mathematics is that it is abstracted at the same time as the study of an objective being in relation to everything that does not belong to the most general aspects of the material world under study, to its quantitative aspects, and to spatial forms and relations. recognizes the abstraction and generality of concepts. Expresses connections between them, teaches such connections, assumes general activities about numbers, notions and elementary concepts about arithmetic operations, various skills and abilities, types of activities, forms and methods of teaching. Socio-economic relations in our country, changes in the public education system, as reflected in the laws on education and the "National Training Program", each primary school 'puts an important task in front of the waiter. This task allows to distinguish the specific links for primary education, which are the introduction of education in different curricula, textbooks in textbooks and the formation of a network in the methodological system. can do. State educational standards provide ample opportunities for the development of curricula in the subject. It also serves to ensure the interdependence of disciplines and interdisciplinary connections based on the principles of interdisciplinary communication and knowledge coordination. When we talk about the methodological and mathematical training of teachers in the primary grades, we need to understand that they are prepared in an integral connection with scientific, pedagogical and mathematical training.

The methodology of teaching mathematics in the organization of interdisciplinary communication has several tasks:

1. Implementation of educational and practical tasks;
2. To cover the process of studying the system of theoretical knowledge;
3. Teach students how to shape their worldview;
4. Humanization of education;
5. In the process of teaching mathematics, a person should be taught to love work, to cultivate such values as self-esteem and mutual respect;
6. Teaching methodology consists of teaching in connection with the content of mathematics in grades 5-6, which is a continuation of mathematics in grades 1-4.

Mathematics has a special place in primary education, because it not only develops children's calculation skills, but also develops their worldview, introduces them to the various concepts and quantities of life. In solving any of the examples and problems given in the textbooks, we identify the connections that science makes and connect them with life. In recent years, the whole system of teaching mathematics in primary schools of the country has undergone significant changes in terms of scale and importance. The introduction of new tasks in the school has radically changed the content of teaching mathematics. One of the most interesting lessons in elementary school is math. In order for students to think and keep up with the times, they need to be introduced to mathematics, the father of science, from an early age. Mathematics, in turn, is inextricably linked with all the subjects studied. In turn, didactic games are used in the teaching of mathematics. This means that sometimes we have to cover several subjects in one lesson. The level of organization of the lessons also depends on the creativity of the teacher. Math games and picture puzzles add

to the fun of everyday lessons. In order for primary school students to master the basic mathematical concepts, the teacher must choose a convenient method and forms (types) of lessons. Didactic games play an important role in this. Indeed, play is one of the traditional and tried-and-tested ways of educating kindergarten and school-age children and adolescents. Students should not only master the program materials in mathematics, but also try to observe, compare, think about the environment, events and processes, substantiate their conclusions, and speak mathematical language. Didactic games provide an opportunity to individualize the work in the classroom, to assign tasks to the strength of each student, to maximize his abilities. Through play, students reinforce the knowledge they have learned from the lesson, preparing them to apply it to life. It is advisable to use puzzle games in the process of teaching first graders numbers from 11 to 20.

In conclusion, the teacher's focus on improving the education system is the focus on our great nation, our future, and our future. As a result of such reforms, our future heirs We will create opportunities for the young generation to acquire solid knowledge, apply their knowledge in everyday life, to grow into perfect people, that is, as our esteemed President Shavkat Mirziyoyev said, "Our young people have independent thinking, high intellectual and spiritual potential. We will mobilize all the forces and capabilities of our state and society to grow and be happy as people who do not come to their peers in any field in the world. " Indeed, the focus on the education system is a guarantee of confidence in our great future.

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