

## STEAM TA'LIMI ORQALI BOLALARDA ASOSIY KO'NIKMALARNI RIVOJLANTIRISH

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*Namangan viloyati pedagoglarni yangi metodikalarga o'rgatish milliy markazi*

**Annotatsiya:** Ushbu maqolada STEAM ta'limining maqsadi, STEAM ta'limining bolalarda asosiy ko'nikmalarini shakllantirishdagi ahamiyati va erta bolalik davrida bolalarni STEAM ta'limiga yo'naltruirish usullari haqida fikrlar bayon etilgan.

**Kalit so'zlar:** STEAM, STEAM ta'limi, ilm-fan, texnologiya, muhandislik, san'at va matematika, asosiy ko'nikmalar

## РАЗВИТИЕ БАЗОВЫХ НАВЫКОВ У ДЕТЕЙ ПУТЕМ STEAM ОБРАЗОВАНИЯ

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**Аннотация:** В данной статье рассматриваются цель STEAM-обучения, значение STEAM-обучения в формировании основных навыков у детей, методы направления детей на STEAM-обучение в раннем детстве.

**Ключевые слова:** STEAM, STEAM-образование, наука, технология, инженерия, искусство и математика, базовые навыки.

## DEVELOPMENT OF BASIC SKILLS IN CHILDREN THROUGH STEAM EDUCATION

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**Abstract:** This article discusses the purpose of STEAM education, the importance of STEAM education in the formation of basic skills in children, and the methods of directing children to STEAM education in early childhood.

**Keywords:** STEAM, STEAM education, science, technology, engineering, arts and mathematics, basic skills

STEAM (Science-natural sciences, Technology-technologies, Engineering-engineering, Art-art, Mathematics-mathematics) is a broad term used to combine several scientific disciplines: science, technology, engineering, art and mathematics. The term is commonly used to refer to educational policies or curriculum choices in schools.

Why is STEAM important? The world economy is changing. Existing jobs are disappearing due to automation and new jobs are being created every day as a result of technological advancement.

The continuous advancement of technology is changing the way students learn, connect, and interact every day. The skills children develop through STEAM provide them with a foundation for success in school and beyond.

Employer demand for STEAM qualifications and skills is high and will continue to grow in the future. Currently, 75% of jobs in the fastest growing industries require workers with STEAM skills. To be competitive today, all industries need people who can adapt to the changing workplace in their workforce.

According to the decree of the President of the Republic of Uzbekistan dated April 29, 2019 No. PF-5712 "On approval of the concept of development of the public education system of the Republic of Uzbekistan until 2030" in every region of the republic during 2019-2021 "President's schools" specialized in STEAM (science, technology, engineering, art and mathematics) directions were gradually established.

In this concept, the introduction of general education programs and new state education standards that meet the requirements of the modern innovative economy, taking into account the special emphasis on the development of competencies and skills of STEAM sciences and critical thinking, independent search and analysis of information, was determined.

In the decision of the Cabinet of Ministers dated April 29, 2022 No. 229 "On measures to transform the city of Tashkent into a model region with a developed preschool education system", preschool education organizations will gradually introduce Training was organized based on the STEAM (science, technology, engineering, art and mathematics) approach.

In the decision of the President of the Republic of Uzbekistan dated September 30, 2019 No. PQ-4467 "On measures to radically increase the effectiveness of extracurricular education in the public education system" in "Barkamol Avlod"

children's schools 2022/2023 Starting from the academic year, the program "STEAM-education" (Science-natural sciences, Technology - technologies, Engineering - engineering, Art - mathematics - mathematics) will be introduced and "STEAM - In order to introduce the "lim" program, it was decided to study the experiences of developed countries, including the organization of foreign trips.

STEAM empowers people to succeed and adapt to this changing world.

STEAM is an approach to learning and development that integrates the fields of science, technology, engineering, art and mathematics.

Through STEAM, children develop key skills including:

- problem solving
- creativity
- critical analysis
- teamwork
- independent thinking
- initiative
- communication
- digital literacy.

By developing an interest in science and social studies in preschool or immediately after school, the chances of STEAM success in high school can be greatly increased.

STEAM supports expanding the study of engineering in each of the other disciplines and starting engineering in the younger grades, even in elementary school. It also brings STEAM education to all students, not just gifted programs.

At its core, STEAM education refers to educating students in five specific disciplines: science, technology, engineering, art, and mathematics. Rather than educating students in one of these fields, STEAM integrates all five in an interdisciplinary and applied approach to better equip students to pursue careers and consider real-world applications.

What is STEAM education? In many developed countries, STEAM education has grown in recent years as a curriculum that focuses on improving students' skills by providing a holistic learning platform based on real-world applications. It forms the basis of many industries, from healthcare to aviation, and is often considered an integral part of an organization, and is therefore becoming an increasingly important field for students.

STEAM classrooms typically focus on project-based learning. Ongoing projects and activities usually involve cutting-edge technology to highlight practical applications of science in the near future. Students can apply various areas of STEAM

in a context that helps them understand the connection between the classroom and the world around them.

STEAM in early childhood. Children's experiences in the early years are very important. As your child's first teacher, your role is critical in creating opportunities that promote learning in a fun and safe environment.

You can help your child by creating a home environment that encourages curiosity and questioning through play.

You can help by teaching them basic STEM skills:

- ask questions
- working together
- creative thinking
- problem solving
- learn and take calculated risks
- test problem solving
- discover new ways of doing things.

There are so many fun things you can do at home or when you're out and about that makes learning fun for everyone.

By encouraging your child to ask questions, you are helping him to be an active participant in his learning and to understand the world around him.

When children ask questions, they develop critical thinking skills and develop STEAM skills. Why? try not to answer. Instead, respond with alternative questions and ideas and encourage them to search for answers and solutions on their own.

Here are our top 7 tips for parents to get your kids interested and moving forward with STEAM curriculum and concepts:

1. Connect to STEAM around you. Parents can do a lot in terms of "real world" connections to STEAM education. Every day can be an opportunity for parents to introduce their children to STEAM topics, because they are related to almost all aspects of your environment and surroundings.

2. Walk. Take a walk with your children. Look at different architecture and how it plays a role in artistic and engineering achievements. Mention the changing colors of leaves and the scientific aspect of nature. Notice how technology is being used to advance your community. All of this is somehow related to STEAM.

3. Cook at home. Explain why there is a scientific purpose and process behind recipes and measurements and how this affects every dish you cook. Discover different cultures through food and its global influence on the culinary world.

4. Follow your child's interests. Find out what your child is interested in. Take every opportunity to explain the science and technology behind his hobbies and activities. If they are interested in art, teach them different types of art. Get them excited about building these basic skills and connecting them to STEAM topics.

5. Know the importance of STEAM subjects for your children's future. STEAM is specifically the intersection between engineering, technology and art. STEAM is the future and what companies and countries are investing in for the future.

6. Connect with STEAM principles in sports and games. STEAM elements are actually ubiquitous in the world of sports as well as games. Take the video game Minecraft for example. The game has strategy and includes elements of technology and engineering. Baseball has a lot of numbers and statistics to discuss, giving parents an opportunity to talk with their kids about the math and science behind the sport. The point is that parents should be involved in their child's further education, showing STEAM connections and making it fun.

7. Invest in the future of STEAM. There is no clear career path in 2023, but there are skill sets that include STEAM that need to be nurtured and developed. From bankers to plumbers, every career requires advanced skills that can be taught through a STEAM curriculum.

### **Conclusion**

STEAM learning is the way of the future. As people become more and more dependent on technology, significant technological developments need to be made to meet the demand. This can only be done sustainably through STEAM education.

Where STEAM has proven to be better than the traditional math and summer program is in the blended learning environment and showing students how the scientific method can be applied to everyday life. It teaches students to think computationally and focus on real-world problem solving.

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