

**STEAM TECHNOLOGIES, A NEW STAGE IN THE DEVELOPMENT OF PRESCHOOL CHILDREN**

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**Abstract:** The implementation of the STEAM education model, which is an important component of many projects being implemented today, largely depends on the creation of a new subject-spatial environment of the education system as a whole, updating the content, software and methodological support, and material and technical base. STEAM technologies make it possible to introduce children to technical creativity, which contributes to the formation of the inclinations of engineering and technical thinking, and also gives children the opportunity to show initiative and independence, the ability to creative and cognitive actions.

**Keywords:** STEAM-technologies, to introduce children to technical creativity, the formation of the inclinations of engineering and technical thinking, the manifestation of initiative and independence, the ability to creative and cognitive actions.

**Аннотация:** Реализация модели STEAM-образования, является важным компонентом многих проектов, реализуемых сегодня, в значительной степени зависит от создания новой предметно-пространственной среды системы образования в целом, обновления содержания, программно-методического обеспечения, материально-технической базы. STEAM-технологии дают возможность приобщать детей к техническому творчеству, что способствует формированию задатков инженерно-технического мышления, а также дает возможность проявлять детям инициативу и самостоятельность, способность к творческим и познавательным действиям.

**Ключевые слова:** STEAM-технологии, приобщать детей к техническому творчеству, формирование задатков инженерно-технического мышления, проявление инициативы и самостоятельность, способность к творческим и познавательным действиям.

A modern teacher is, first of all, an erudite, energetic, creative person, possessing professional qualities and loving his work. He must be a mentor.

Changes over the past few decades are exciting, but at the same time, they make us worry. Every day new types of work and even entire professional fields appear, which is why modern teachers should think about whether the knowledge and skills they teach meet the needs of the time? Researchers are convinced that 65% of modern preschoolers will master professions that do not exist today. It will require young professionals who own the latest technology, understand the natural sciences and engineering.

What might interest our pupils, you ask?.. We answer... STEAM-technologies. They will allow teachers to raise a generation of successful researchers, inventors, scientists, technologists, artists and mathematicians.

A reasonable question arises, why exactly STEAM and exactly in kindergarten? Our preschoolers should be ready for school innovations, creating projects and the ability to implement them in reality. How to implement STEAM education in kindergarten? STEAM is an educational approach that incorporates the arts into the more-familiar STEM model, which includes science, technology, engineering and mathematics. STEAM programs can include any of the visual or performing arts, such as dance, design, painting, photography and writing.

The focus has been on STEM fields and education for them since the late 20th century, when the ongoing shortage of technology workers began. Since that time, government agencies in many countries around the world have invested heavily in STEM education and its promotion. The emphasis on fostering STEM skills has inescapably led to decreased emphasis on other subjects in the arts and humanities,

with the result that funding for them has dwindled and students have fewer arts-related options.

Reintegrating art and design into education has been demonstrated to increase the happiness and well-being of students. From a business and perspective, the major payoffs include better problem-solving skills and increased creativity and innovation. The integration of arts into STEM education and fields may also help encourage more participation by women in what have been male-dominated areas. Firstly, the creation of a mixed subject-spatial environment that will allow for design and experimental research activities, the creation of IT technology classrooms, a STEAM laboratory, and LEGO centers.

Secondly, STEAM integrates various activities of preschoolers that combine all five areas, and provides an opportunity to demonstrate results. After all, the main motto of the STEAM program is: “Minimum theory, maximum practice”.

What is the role of the educator? Only the innovative approach of teachers makes it possible to achieve high results through practical research activities.

What do you need to know about STEAM technology? There is one main thing you need to know about STEAM - it is not just a fashion in education, it is an investment in the future of children, where a child can master several professions, be sociable, creative, fluent in the audience and defend their projects.

The use of STEAM technologies in our work began with the acquisition and use of LEGO constructors, which, when organizing the educational process, make it possible to introduce children to technical creativity, which contributes to the formation of the inclinations of engineering and technical thinking, and also makes it possible for children to show initiative and independence, the ability to goal-setting and cognitive actions. Promotes the development of attention, memory, thinking, imagination, communication skills, the ability to communicate with peers, vocabulary enrichment, the formation of coherent speech.

In the process of mastering LEGO construction, which combines elements of play and experimentation, preschoolers learn the basics of modern robotics, which contributes to the development of technical creativity and the formation of scientific and technical orientation in children.

The implementation of the STEAM education model, which is an important component of many projects being implemented today, largely depends on the creation of a new subject-spatial environment of the education system as a whole, updating the content, software and methodological support, and material and technical base.

The STEAM education program in preschool education has several modules:

1. Didactic system of F. Frebel;
2. Experimenting with animate and inanimate nature;
3. LEGO construction;
4. Mathematical development;
5. Robotics;
6. Multi-studio "I create the world."

For my work, I chose "Experimenting with animate and inanimate nature." Why did I choose this module, you ask? I answer: "Research activity is of great interest to children. An unquenchable thirst for new experiences, curiosity, a constant desire to independently seek new information about the world. Frequently asked questions: Why? Why? When? Experiments somehow remind children of magic tricks, they are unusual, they surprise.

The child's need for new impressions underlies the emergence and development of inexhaustible orienting research (search) activity aimed at understanding the world around. The more varied and intense the search activity, the more new information the child receives, the faster and more fully he develops.

What result did I want to get?

1. To develop children's interest in independent research, discoveries.

2. Develop observation, curiosity.
3. Develop cognitive processes: logical thinking, perception, voluntary attention, memory, fine motor skills, active speech and enrich vocabulary.
4. Enrich the subject-developing environment in the group.
5. To form self-confidence in children through the development of mental operations, creative prerequisites and, as a result, the development of personal growth and a sense of self-confidence and self-confidence in children.

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