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THE IMPORTANCE OF STEAM TECHNOLOGY IN DEVELOPING TECHNICAL CREATIVITY AND ENGINEERING SKILLS IN PRESCHOOL CHILDREN

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ANNOTATION

This article discusses the relevance of developing technical creativity and engineering skills in preschool children and its features, reveals a positive and useful need for modern development. To develop methodological recommendations for the development of technical creativity and engineering skills in preschool children.

Keywords

preschool education, child, teacher, parents, methods, game, making, construction, project, activity, innovation, STEAM technology.

Annotatsiya

Ushbu maqolada maktabgacha yoshdagi bolalarda texnik ijodkorlik va muhandislik ko'nikmalarini rivojlantirishning dolzarbligi va uning xususiyatlari muhokama qilingan, zamonaviy rivojlanish uchun ijobiy va foydali ehtiyoj ochib berilgan. Maktabgacha yoshdagi bolalarda texnik ijodkorlik va muhandislik ko'nikmalarini rivojlantirish bo'yicha uslubiy tavsiyalar ishlab chiqish maqsadga muvofiqdir.

Kalit so'zlar

maktabgacha ta'lim, bola, o'qituvchi, ota-onalar, usullar, o'yin, yasash, qurilish, loyiha, faoliyat, innovatsiya, STEAM texnologiyasi.

АННОТАЦИЯ

В данной статье рассматривается актуальность развития технического творчества и инженерных навыков у детей дошкольного возраста и его особенности, раскрывается позитивная и полезная потребность современного развития. Разработать методические рекомендации по развитию технического творчества и инженерных навыков у детей дошкольного возраста.

Ключевые слова

дошкольное образование, ребенок, педагог, родители, методы, игра, изготовление, конструирование, проект, деятельность, инновация, STEAM технология.

INTRODUCTION: The training of future engineers should begin not at universities, but much earlier - from preschool age, when children's interest in technical creativity is obvious. It is necessary to develop technical experience of thinking, analytical intelligence and other personal qualities. Therefore, preschool educational organizations are faced with the task of developing design and creative activity in children, that is, it is important to educate a creative child who has the ability to think creatively, can navigate in the world of high-tech equipment and independently create new technical forms. Therefore, at the present stage of pedagogical activity, work on the introduction of an innovative program, including the development of engineering thinking, is relevant and has high requirements.

The problem of forming future independent life skills and developing personal competencies of preschool children, as well as preparing them for engineering from an early age, is extremely urgent and urgent. Its solution is to develop in children the ability to work, self-service, participation in household life, and creativity through familiarization with adult labor,

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and as a result, they will gain a place in the production process and living conditions. Modern research shows that in the future, engineering schools such as Presidential Schools will develop. According to scientists, the demand for technical engineers is increasing year by year, and the interest in studying and researching, connecting science with practice, is increasing. Because engineering is the heart of the economic development of society.

It consists in clarifying, systematizing and developing knowledge of preschool children in social and domestic life, in production, construction and design, textile and light industry, in technical, technological processes, crafts, entrepreneurship. Our main goal is to qualitatively prepare children for school in preschool educational organizations.

Engineering thinking is understood as a type of cognitive activity aimed at researching, creating and using new highly efficient and reliable equipment, advanced technologies, automation and mechanization of production, and improving product quality. The main thing in engineering thinking is to solve specific tasks and goals set by production with the help of technical means in order to achieve the most effective and high-quality result. At the same time, rationalization, inventions and discoveries, as the results of scientific and technical creativity, lead to qualitatively new results in the field of science and technology and are distinguished by their originality and originality.

MATERIALS AND METHODS: In our scientific research, we effectively used the interactive methods of "SWOT analysis", "Interview", "Brainstorming", ideas were presented on specific examples.

The tasks to be solved for the development of the necessary conditions for engineering thinking include:

- development, discussion and correction of thematic, educational programs of scientific and educational laboratories, STEM projects, projects for solving technical problems;
- implementation of educational activities of scientific and educational laboratories, STEM projects, projects for solving technical problems;
- evaluation of the results of activities;
- implementation within the framework of the project;
- consideration of the social application of the parents (legal representatives) of the project;
- preparation of reports on the progress of the project;
- the creative group reviews the implementation of the project once every two months.

DISCUSSION AND RESULTS: to study the relevance and need for developing technical creativity and engineering skills in preschool children, to study the useful value, to develop engineering art in children during the period of rapid development of technology and technology, to develop the ability to predict in this direction.

It is recommended to organize planned work on solving small project problems that develop children's technical creativity in preschool educational organizations:

• Organizing independent activities of children in the center of social and domestic needs: organizing interactive games “We repair household appliances”, “I sew a dress for my doll”, “We make toys”, “We work with robotics”, “A trip to a clothing store”.

• Teaching children to prepare their own workplace and cultivate a culture of work in it.

• Teaching them to correctly evaluate their own and others' work, depending on the result, quality, and significance of the work performed, depending on the time it was performed.

• Children should understand the intended purpose of their work - “Why do we need to do this work?”, “What is the intended purpose of doing this work?”

• Teaching them to complete work according to the plan at the appointed time.

The main part of the project is a conversation with children:

- What do we do?
- What do we need to do for this?
- What materials, equipment, and tools are needed for our work?

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- How should we place these materials and tools in our workplace so that they are convenient to use?
- How should we start and continue the work?
- How do we finish the work?
- Development of models of “My House”, “Smart City” for construction and construction activities as a result of a small project product that develops children's technical creativity in preschool educational organizations;

* Study of the art of sewing and knitting and sewing clothes for toys and dolls, ironing, exhibition of creative works

* Work with attributes, characters in the center of staging and plot-role-playing games and sewing, manufacturing;

* Game technology: meaningful organization and discussion of games such as "Builder-builder", "Seller-seller", "What tools do we need to work?", "What do we start with?".

Proper organization of independent labor activities in children ensures high-quality work. In the development of technical creativity, the implementation of a project and its effective use form the skills of manual labor, work, through manual labor, the child achieves results - new things, objects, models are created, created. Children acquire simple labor skills and skills such as drawing, painting, cutting, gluing, making, sawing, hammering nails, sewing, knitting and similar skills, the secrets of craftsmanship, engineering art. They develop creativity, technical creativity, intelligence, and most importantly, learn to complete the work they have started. Children develop an aesthetic taste. They enjoy their work and its results, and they come to appreciate hard work. Children are preparing for their future lives, and they are able to understand and apply in practice the freedom to choose a profession and acquire a skill from an early age.

CONCLUSION: Preschool children's technical creativity skills include drawing, coloring, cutting, gluing, making, sawing, nailing, sewing, knitting and other simple work skills and abilities, secrets of the craft, engineering art. They learn creativity, technical creativity, intelligence, and most importantly, to finish what they started. Children develop an aesthetic taste. They enjoy their work and its results and appreciate hard work. Children are preparing for their future life, they can freely choose a profession, understand and apply it in practice from an early age.

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