

Lego Constructions in the Formation of Mathematical Concepts

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ABSTRACT

In modern pedagogy, considerable experience has been accumulated in the development of thinking with the help of various types of children's activities. One of the most effective, according to many experts, is design. Lego-designing experts refer to a special type of children's activity, to the basic type of creative activity, during which preschoolers develop all the basic thought processes. This article focuses on working with Lego, assembling children's buildings and building skills.

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Lego is one of the most famous and widespread pedagogical systems that widely uses three-dimensional models of the real world and a subject-play environment for learning and developing a child. Lego allows children to learn by playing and learning through play.

In modern pedagogy, considerable experience has been accumulated in the development of thinking with the help of various types of children's activities. One of the most effective, according to many experts, is design. Lego-designing experts refer to a special type of children's activity, to the basic type of creative activity, during which preschoolers develop all the basic thought processes.

LEGO building is not just a game, but a serious activity that helps children feel like real inventors.

Didactic games with Lego-constructor, contribute to:

- 1) the development of sensory representations in children, since parts of different shapes are used, painted in primary colors;
- 2) development and improvement of the higher mental functions of memory, attention, thinking, emphasis is placed on the development of such mental processes as analysis, synthesis, classification, generalization;
- 3) training the fingers of the hands, which is very important for the development of fine motor skills of the hand and in the future will help prepare the child's hand for writing;
- 4) rallying the children's team, the formation of a sense of friendliness.

With great confidence, we can say that one of the most interesting features of Lego constructors is that they develop the cognitive functions of a person (both a child and an adult).

Under the cognitive functions of a person, we mean such functions of the brain as memory, attention, perception, speech, creative imagination, as well as the speed of decision-making. It just so happens that such properties of the central nervous system are universally applicable in various aspects of life, which

means that the benefits of Lego constructors are quite high.

According to modern teachers, the cognitive development of children in a preschool institution should include:

1. development of speech and speech communication;
2. development of spatial thinking and imagination;
3. development of logical thinking;
4. formation of sensory coordination and motor skills of hands;
5. the use of active forms of cognition of the surrounding reality.

Also, the use of such constructors on an ongoing basis allows you to develop and improve fine motor skills, which again is very important in childhood. The Lego constructor simply cannot get bored, as it is very bright, convenient, diverse and you can always build something new and unusual from the most ordinary cubes.

Lego-games (cards) are presented to your attention for the development of thinking, attention, sensory coordination not only for children, but also for adults.

1 game "Pick up a cube by size."

2 game "Pick up a cube by color and size."

3 game "Pick up a cube by color and size."

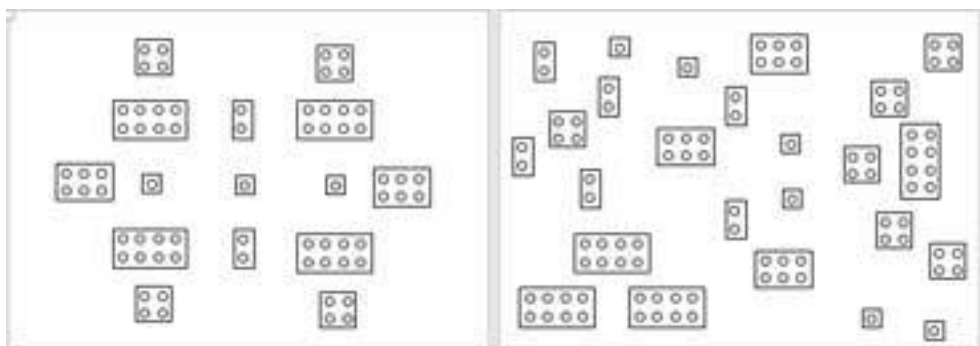
4 game "Pick up a cube and lay it out simultaneously with both hands."

5 game "Lay out on the right as well as on the left."

6 LEGO Sudoku game.

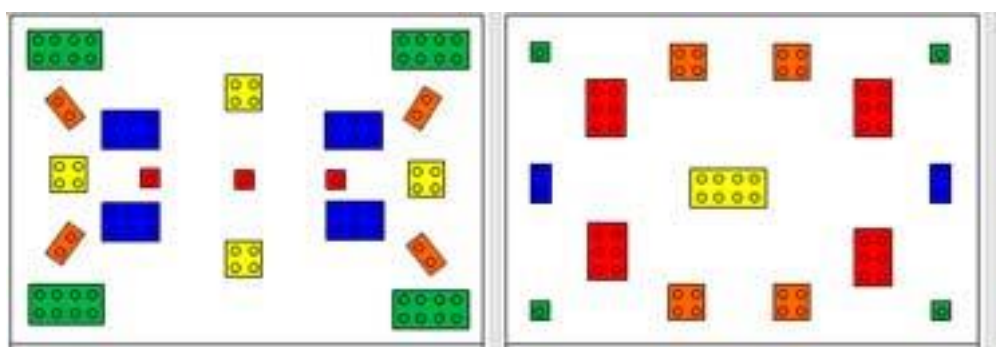
1 game "Pick up the cube."

The essence of the game is that the child needs to pick up a LEGO cube in size.



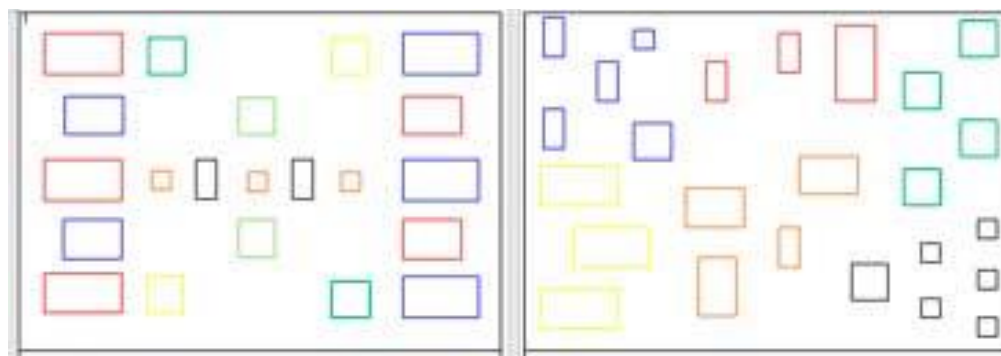
2 game "Pick up a cube by color and size."

The essence of the game is that the child needs to pick up a LEGO cube in size and color.



3 game "Pick up a cube by color and size" (complicated version).

The essence of the game is that the child needs to pick up a LEGO cube in size and color.



In general, the options for using the Lego constructor to teach the basics of mathematics are almost endless! Get your child interested in familiar stories, connect your favorite toys, and you yourself will not notice how mathematics turns from a boring school science into an exciting and beloved game!

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