Puzzles as a Didactic Tool for Development of Mathematical Abilities of Junior Schoolchildren in Basic and Additional Mathematical Education

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Abstract
Pedagogical science has always faced the issue of finding effective means for achieving educational results. This problem is especially urgent today, when in the rapidly changing world the tools, which yesterday could be used to support the interest of schoolchildren in study of mathematics and could provide an opportunity for the development of their mathematical abilities, quickly become obsolete. Today it is very important to search for new means that foster the development of students with the help of mathematics and mechanisms for including mathematics in the educational process. Thus, the aim of the article is to analyze puzzles as a didactic tool and study the possibilities of using puzzles in the process of teaching junior schoolchildren mathematics, both in the classroom and extra-curricular activities. The leading method here is the modeling of the methodical training system in general and additional mathematical education of schoolchildren, with the inclusion of a new didactic tool that fosters the students’ interest to the subject, develops individual mathematical abilities: logical thinking, abstraction, combining, operating spatial images, critical thinking, mathematical memory, etc. As a result of the research, the authors have determined the place, features and methodological aspects of the inclusion of puzzles in the process of teaching mathematics in general and additional school education. They can be used in the system of classical and creative math lessons and in extra-curricular activities of students: a mathematical club, a system of mathematical competitions, a mathematical camp, etc. The practical use of this model makes it possible to reduce the lack of tools in teaching for the development of students’ mathematical abilities, which in its turn, makes it possible to speak of purposefully high results in students’ mathematical activities, which is confirmed by the conducted experimental research.

Keywords
Teaching mathematics in secondary school means of teaching mathematics puzzles development of mathematical abilities of schoolchildren increasing schoolchildren’s interest to mathematics

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Article Type: Research Article

https://doi.org/10.29333/ejmste/93675

Publication date: 22 Jul 2018

Article Views: 1749

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Read. The Development of Ele by A.M. Leushina. Other editions. Want to Read saving… Error rating book. Refresh and try again. Rate this book. Clear rating. 1 of 5 stars 2 of 5 stars 3 of 5 stars 4 of 5 stars 5 of 5 stars. Open Preview. See a Problem? We’d love your help. Let us know what’s wrong with this preview of The Development of Elementary Mathematical Concepts in Preschool Children by A.M. Leushina. Problem: It’s the wrong The state of children’s mathematical development as they begin school both determines what they must learn to achieve mathematical proficiency and points toward how that proficiency can be acquired. Chapter 4 laid out a framework for describing mathematical proficiency in terms of a set of interwoven strands. The process includes the progressive development of an ability to create unit items to be counted, first on the basis of conscious perception of external objects and then on the basis of internal representations. Spanish follows the same basic pattern for English to begin the teens, although there may be a clearer parallel between uno, dos, tres and once, doce, trece than between one, two, three and eleven, twelve, thirteen. For most children, the sensitive development period for learning mathematical concepts is between the age of four and six years. Through the Montessori Curriculum areas of Practical Life, Sensorial and Mathematics, children experience the concepts of order, measurement, calculations, numeric symbol recognition, counting, and exactness. There are six key skill areas within the Montessori Mathematics Curriculum, including: numeration (numbers 1 – 10), the decimal system, the tradition names, the arithmetic tablets, and the passage to abstraction and fraction. Classes are organised, hygienic, and educators focus on the physical, emotional, and psychological development of each child. Thank you to each and every teacher at Montessori Academy. DEVELOPMENT OF MATHEMATICAL CONCEPTIONS OF SCHOOLCHILDREN OF LOWER GRADES.

M. E. Zhumaev. Development of theoretical and methodological fundamental principles of the entire system of mathematics of a student who is to be a future teacher and tutor of lower grades opens the possibility to implement a conceptually new approach to providing mathematics knowledge to children of 3 - 11 years old. In the course of our research we have revealed and substantiated the following conditions for such an approach: (a) specific characteristics and forms of a child’s intellect limit the capability of learnin Gorev PM, Telegina NV, Karavanova LZ, Feshina SS. Puzzles as a Didactic Tool for Development of Mathematical Abilities of Junior Schoolchildren in Basic and Additional Mathematical Education. EURASIA J Math Sci Tech Ed. 2018;14(10):em1602. https://doi.org/10.29333/ejmste/93675. APA. Gorev, P. M., Telegina, N. V., Karavanova, L. Z., & Feshina, S. S. (2018). Puzzles as a Didactic Tool for Development of Mathematical Abilities of Junior Schoolchildren in Basic and Additional Mathematical Education. Eurasia Journal of Mathematics, Science and Technology Education, 14(10), em1602. https://doi.o