

МАКТАБГАЧА ТАЪЛИМ МУАССАСАЛАРИ ТАРБИЯЛАНУВЧИЛАРИГА ЭЛЕМЕНТАР МАТЕМАТИК ТУШУНЧАЛАРНИ ҲАҚИДА СЎЗ ЮРИТИЛАДИ

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ИСПОЛЬЗОВАНИЕ ПРОГРАММНЫХ СРЕДСТВ ПРИ ОБУЧЕНИИ ЭЛЕМЕНТАРНЫМ МАТЕМАТИЧЕСКИМ ПОНЯТИЯМ ВОСПИТАННИКОВ ДОШКОЛЬНЫХ ОБРАЗОВАТЕЛЬНЫХ УЧРЕЖДЕНИЙ

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USING SOFTWARE IN TEACHING ELEMENTARY MATHEMATICS CONCEPTS FOR TRAINEES OF PRESCHOOL EDUCATIONAL INSTITUTIONS

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Annotatsiya: Maqolada maktabgacha ta'lim tashkilotlari tarbiyalanuvchilariga elementar matematika tushunchalar berishi, sodda matematik mалакаларини rивожlantirishi usullaridan foydalаниш ҳақида сўз юритилади.

Таянч сўзлар: Мактабгача ёшдаги болалар, элементар математика, шакллантириш, компетенция, дастур, интерактив, аналогия, машғулотлар, мантиқий топшириқлар, iSpring дастури, билим, кўникма ва малакалар

Резюме: В статье речь идет об использовании методов для развития основных математических навыков, для обеспечения учащихся дошкольного образования основными математическими понятиями.

Ключевые слова: дошкольники, элементарная математика, формирование, компетенция, программа, интерактив, аналогия, уроки, логические задания, программа iSpring, знания, умения и навыки.

Summary: The article deals with collections of methods for the development of basic mathematical skills for preschool children of basic mathematical concepts.

Key words: preschoolers, elementary mathematics, formation, competence, program, interactive, analogy, lessons, mixed tasks, iSpring program, knowledge, abilities and skills.

The state curriculum of the preschool educational institutions «Ilk kadam» (The first step) is a normative-legal document which developed in accordance with the State requirements for the development of children of primary and preschool age of the Republic of Uzbekistan, defined the main competencies during the transition.

General important competences of the preschool age (6-7 years old) child: communicative competence, game competence, social competence, cognitive competence are also defined separately.

Also, in the «Ilk kadam» educational program 3.2.4. After completion of educational activities competences in the field of «Development of the cognitive process» a 6-7-year-old child:

- shows an active interest in learning;
- independently finds and uses information for educational and life activities;
- understands simple connections between objects, events and appearances and perceives them as a whole;
- knows numbers, calculation and applies them in life;
- works according to space, form and time;
- performs elementary mathematical calculations;
- observes and studies events and phenomena in the environment;
- shows a careful and caring attitude towards the environment [1,8].

The goal of developing simple mathematical skills in preschool educational organizations covers the following directions:

1. Forming ideas about geometric shapes and shapes of objects.
2. Formation of spatial aiming skills.
3. Formation of ideas about time.
4. Forming concepts about quantity.
5. Forming concepts about counting [4,5].

A number of well-known mathematicians have created a system of scientifically based methods for the formation of elementary mathematical concepts for students of preschool educational organizations. For example, I.A. Markushevich provides a methodological program on the skills of students, S.I. Shvartsburd divides them into several components in the formation of mathematical concepts, B.V. Gnedenko in his work distinguishes two types of mathematical abilities: «Normal, medium ability» and «distinguishes levels such as «higher than average ability», and also includes a number of factors of educational measures in teaching mathematics [3, 3].

A number of scientists and methodologists of our republic contributed to the formation of elementary mathematical concepts in preschool educational institutions and published methodological manuals. N.U. Bikbaeva and others in their manuals entitled «Development of mathematical concepts in children of preschool age», M.E. Jumaev «Theory and methodology of developing mathematical concepts in children» explained the issues of mathematical knowledge formation in children [3,25].

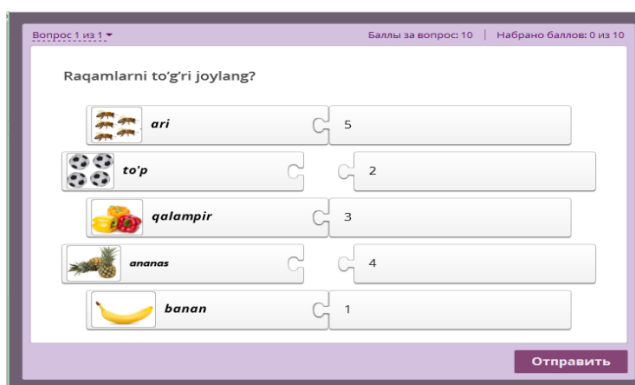
A complex named «Daslepki qadem» has been developed for the formation of mathematical concepts using software tools based on the requirements and competencies of the «Ilk kadam» educational program. The interactive software tool developed by us contains analog examples that allow interactive implementation of elementary mathematical concepts based on multimedia technologies.

The use of the method of analogy (Greek analogia - conformity, exactness, similarity) gives effective results in imparting elementary mathematical knowledge to students based on multimedia technologies in preschool educational organizations. [2,38]. It can be used to study numbers, items, objects, distance, height, shortness, length, abundance. Here are some analogical examples of how to do it on a computer.

For example, 1 chicken and 1 banana are displayed on the monitor screen. The educator asks the children what they see on the screen. Children answer chicken and banana. The educator asks again. He asks how many chickens and bananas there are. Children answer 1 chicken and 1 banana. The educator depicts the number 1 between a chicken and a banana through animation and explains the number 1 with objects. Here, since the educator found both the chicken and the banana to be 1, they make the = sign by telling the number 1 to be =. Thus, it also explains the numbers 2,3,4 ...10.

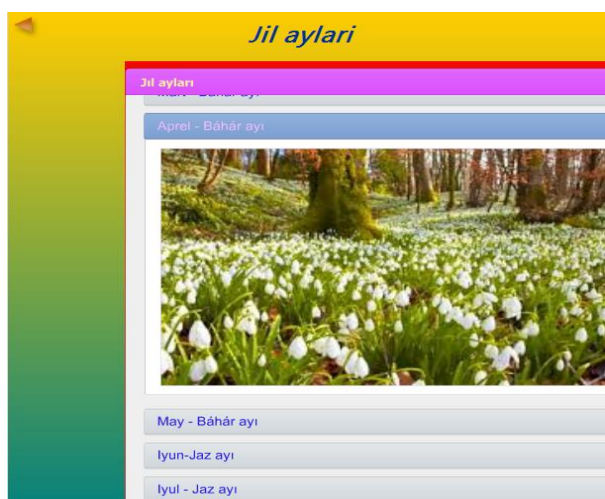


After learning the numbers, the educator gives tasks for the children to complete independently. Here, assignments can be prepared in Power Point, iSpring, or other convenient computer programs. If iSpring uses 11 different tests in the test creation section, it will look like the picture below. When performing this task, the child holds on the number (pressing the left mouse button) and connects it with the corresponding picture.



The educator presses the Send button. Here, if the child has completed the task correctly, he is encouraged and receives a gift with a picture. You can also make the stimulation sound. After such encouragement, children will try to do the next task correctly. If the child performs the task incorrectly, he will warn you that you have done it incorrectly and be more careful.

One of the main concepts in the formation of mathematical concepts is the category of time. It is necessary to rely on the algorithmic theory in forming the concept of time. Because these categories are strictly sequential processes. For example, the days of the week are Monday, Tuesday, Wednesday, Thursday..., January, February,..., hours 1, 2, 3... and so on. For quick recall and clear visualization of these time categories, the software provides a set of exercises, which also focus on self-examination and evaluation. Below is an example of this educational content: For example, exercises on naming the months of the year, seasons and time dimensions.



In this section, the materials for exploring time concepts are presented with graphic, visual, and audio multimedia effects.



After mastering the concepts, there is self-examination with the help of a quiz test. So, children start learning with interest from such a programmed and multimedia learning tool. They can strengthen their knowledge.

Today, preschool education organizations use visual materials, video clips and video films to form mathematical ideas. But these are given separately in the section of topics. This makes it difficult for pedagogues to use technical tools, and the organization of feedback with children is passive.

The software offered by us brings the topics together and requires the children to be active in the exercises. The reason is that mathematical concepts are presented in the form of a specific problem, and its implementation requires the participation of the children. In this process, both the educator and the child are active. What is important is that this teaching is done on the basis of careful feeling. For example: the educator connects the names of the parts of the day with what children and adults close

to them do in the morning, afternoon, evening, and night, and determines the children's ideas about the parts of the day.

When we experimented with this software tool in preschool education organizations №16 in Nukus city and №3 in Nukus district, it was found that the formation of children's initial theoretical understanding of time, the formation of a unit of emotional and logical reflection of time, and the formation of the skills of distinguishing seasons symptomatically are at a high level.

In the process of teaching elementary mathematics to the children of preschool educational institutions, when informatics software tools and information technologies are used, children's activities and interests are formed, and their effectiveness increases compared to the traditional form of training.

References:

1. State curriculum of «Ilk Kadam» preschool educational institution. It was created and published with the technical support of the United Nations Children's Fund UNICEF office in Uzbekistan. T.: 2018-72 p.
2. A.A. Abdukodirov, N.H. Begmatova. Methodology of using multimedia technologies in preschool educational institutions. Against «Nafis publishing house» 2011.
3. Dzhanpeysova G.E. Formation of mathematical ideas. Study guide. Tashkent «Innovation-Ziya» publishing house, 2021.
4. Erkhonova E, Roziyeva Z. «Teacher's book. Mathematics». Practical guide. - Tashkent.: «Zamin Press», 2020)
5. Juginisova J, Allambergenova M. Advantages of using e-learning resources in preschool education. International Journal For Innovative Engineering and Management Research. Nov 2020. Volume 09, Issue 11, Pages: 5-9.
6. Allambergenova M. The development and use of interactive educational complexes in the educational process. // Bulletin of the Karakalpak branch of the Academy of Sciences of the Republic of Uzbekistan - 2010. No. 3, pp. 95-97.
7. Jumaeva M.E. Theory and methodology of developing mathematical concepts in children: T.: Ilm ziya, 2005. -224 p.
8. Nasriddinova Z. Test assignments // Preschool education. -T.: 2005. -#1. - 10 b.
9. Only L.B. Mathematics for children and children. SPb.: Litra, 2006. -32p.:
10. Kudryashova T.G. Syrup A.S. Priklyucheniya v Matematicheskoy straneyu Chast 2. M.: Volnoe delo, 2009. – 121p.
11. Mikhailova A.Z., Babaeva T.I. Razvitie poznavatelno-issledovatel'skikh umeniy u starshikh doshkolnikov/ Metodicheskoe posobie dlya pedagogov. -SPb: OOO Detstvo-Press, 2012g. -160 s.