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USING THE OPPORTUNITIES OF COMPUTER TECHNOLOGIES IN TEACHING SPATIAL BODIES IN THE GEOMETRY COURSE

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ABSTRACT: This article talks about the possibilities and methods of use of computer technologies in the process of teaching spatial objects in geometry. Also, the use of presentational technologies in stereometry classes, the specific aspects and advantages of using computer technologies in the teaching of spatial bodies are revealed, and some information about the effective aspects of this process for teachers and students is given.
Key words: educational effect, computer, technology, geometry, spatial body, graph.

INTRODUCTION

Currently, the main task of the educational system of our country is to achieve an effective result by using information technologies that meet the world's requirements.

Organization based on the use of advanced technologies in the educational process means teaching students how to learn independently. Modern projection technology in the auditorium is taking the place of "blackboard" and "chalk", which were created a long time ago and gained unique importance in their time. Now, instead of the "blackboard", presentation technologies are effectively used, which can repeat explanations at any time, and can focus students' attention on difficult areas. The use of the latest advances in multimedia technologies in education greatly eases the hard work of a mathematics teacher, increases students' interest in education, especially mathematics, and ultimately increases the quality and efficiency of education.

Taking into account the increased mental workload of students in mathematics lessons, it is necessary to think about how not to extinguish the interest and activity of the students in the studied subject throughout the lesson. Using a computer creates a unique informative atmosphere in the audience and stimulates students' interests.

We know that studying stereometry in geometry is difficult for many students, and mastering the learning material is done by memorization.

The use of a computer in the process of studying geometry facilitates the study of the course and serves to implement one of the main principles of didactics: visualization. As noted by the great pedagogue Y. A. Komensky, "Visuality is the golden rule of didactics" constitutes the content of one of the leading principles of education.

LITERATURE ANALYSIS AND METHODOLOGY

Today, there is an increase in interest and demand for the use of computer graphic capabilities in the educational process.

Today, on the basis of increasing the effectiveness of classes, which are the main organizational part of the educational process, and using advanced pedagogical technology and modern information technologies in the classroom, students have world-class knowledge, skills and providing material-technical and information base for the process of formation of qualifications, training high-level qualified personnel, creation of quality, teaching-methodical, scientific and didactic materials, mutually effective between education system, science and production establishment of relations is one of the urgent issues.

The wide use of computer graphics not only in computer science classes, but also in the teaching of many other subjects, including the creation of spatial bodies in the imagination of students in geometry, and their use in making sections with planes, gives its positive results.

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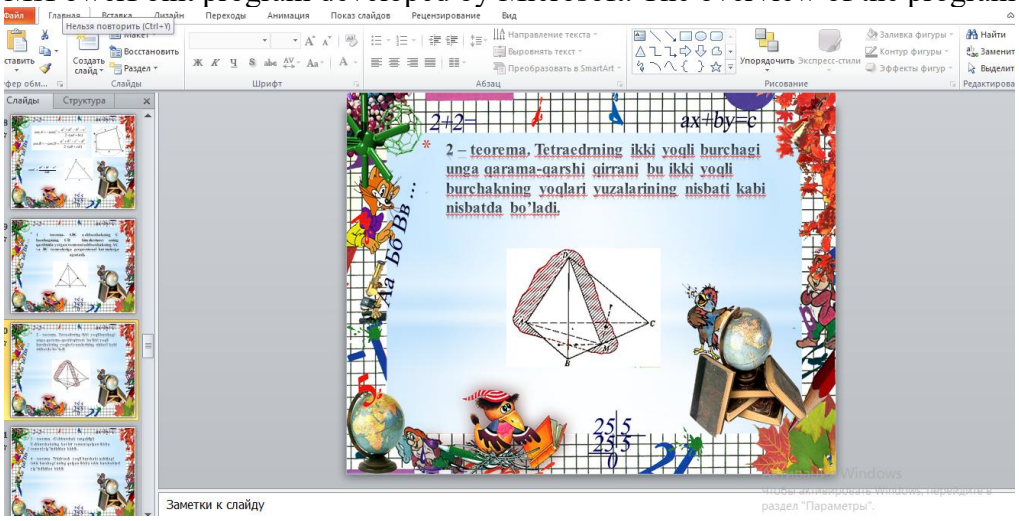
The use of computer graphics in the teaching process creates a number of conveniences and opportunities not only for students, but also for the teacher. For example: it saves time, creates a basis for efficient use of time, the level of accuracy of a drawing increases compared to a drawing drawn on a blackboard, etc.

At this point, it should be noted that the importance of computer programs is incomparable. Such types of programs, i.e. mobile programs, include:

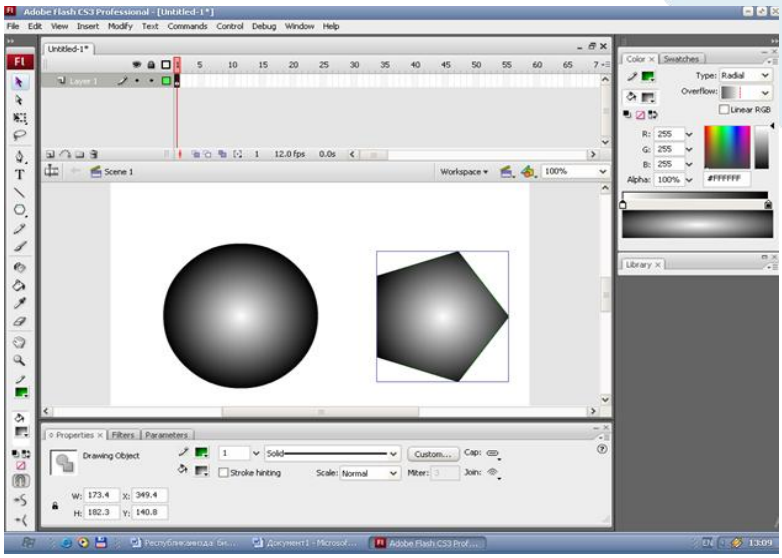
- ✓ MS PowerPoint;
- ✓ MakroMediaFlash;
- ✓ 3d MaxStudio;
- ✓ MatLab programs can be added.

Here are the views of the above computer programs:

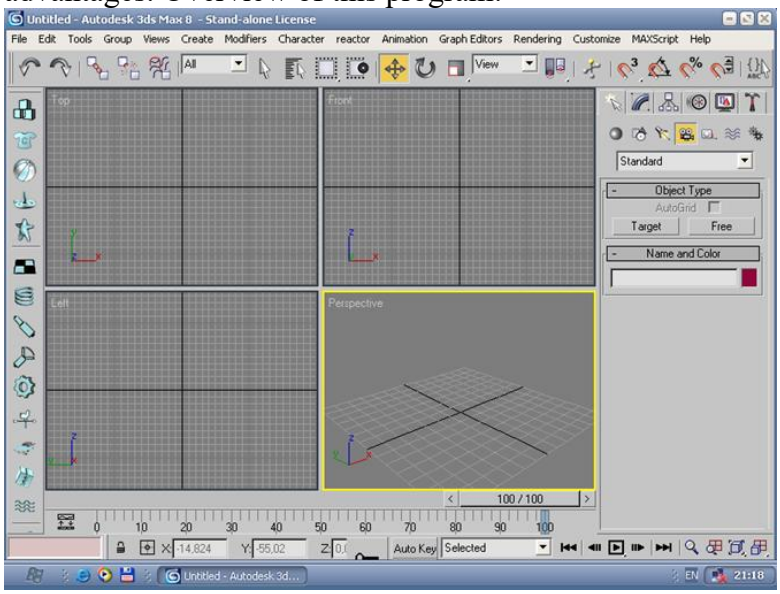
The use of motion computer animations in depicting the cross-sections of spatial bodies has a number of advantages. We can use several created computer programs for this. One of them is the MsPowerPoint program developed by Microsoft. The overview of the program is as follows:



AdobeFlash is one of those types of programs. The advantage of this program is that it has a high level of visibility, and with the help of this program, you can easily create electronic textbooks, various multimedia, and tests related to any topic. An overview of this program is as follows:



3dsMax is one of the most important programs for depicting sections of spatial objects, and this program can easily be used in three-dimensional space. Advantages of the 3dsMax program include: image clarity, a large number of actions, saving in video image format and other advantages. Overview of this program:



Teaching how to make sections of spatial figures has always been a complicated process. This process can be demonstratively and effectively carried out in teaching based on computer technologies. With the help of these programs, it is possible to monitor not only the finished section, but also the stages of making this section. Of course, to do this effectively, the teacher needs to know computer programs and have the skills to use them.

RESULTS AND DISCUSSION

The use of modern computers entering the educational institutions of our country poses tasks such as creating electronic textbooks, virtualization of lesson processes, using virtual and multimedia tools in teaching, and creating a virtual base of education. The importance of computers in the field of education is incomparable. The use of computer tools: multimedia, virtual laboratories and virtual exhibitions in the lessons is another factor of increasing the effectiveness of the lesson.

Computer technology of teaching relies on matching the computer to individual human abilities. It is distinguished by the possibility of optimal management of the training process, the fact that this type of training is in the form of universal communication, psychological comfort, and unlimited training.

Currently, the interest and demand for using graphic capabilities of the computer in the educational process is increasing.

We can widely use computer graphics not only in computer science classes, but also in the teaching of many other subjects, including the creation of spatial objects in the imagination of students in the science of geometry, and their use in making sections with planes gives positive results.

A teacher who uses computer graphics saves time, creates a basis for its effective use, the level of accuracy of a drawing increases compared to a drawing drawn on a blackboard, and has a number of conveniences.

Today, one of the wide possibilities of the computer in the educational process is geometric programs created for the Linux operating system, the advantage of these programs is that they simultaneously include three branches of mathematics, namely geometry, algebra and numerical methods unites.

CONCLUSION

The use of modern information technologies in geometry lessons effectively helps the teacher to achieve a number of goals. For example, the effectiveness of teaching will increase, it will be possible to introduce elements of innovation in solving problems, to use educational time effectively, to demonstrate the educational process, to direct the attention of students to the main parts of the subject, and to show all the beauty of mathematics. allows to show its importance and significance.

From these possibilities, we can say that the use of modern information technologies is effective in achieving many goals for the student:

- ✓ expanding the range of knowledge;
- ✓ increases research activities;
- ✓ colorizes independent work;
- ✓ develops intuition, imagination and other important qualities underlying voluntary creative activity;
- ✓ develops the ability to make mathematical assertions and prove them;
- ✓ allows to identify new geometric facts and check them;
- ✓ increases the skills of self-evaluation and criticism;
- ✓ develops responsibility for learning and positive attitude skills.

Computer technology of teaching relies on matching the computer to individual human abilities. It is distinguished by the possibility of optimal management of the teaching process, the fact that this type of teaching is in the form of universal communication, psychological comfort, and unlimited teaching.

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