

Methods of Mechanical and Mathematical Modeling in the Teaching of Exact and Natural Sciences in the Educational Process

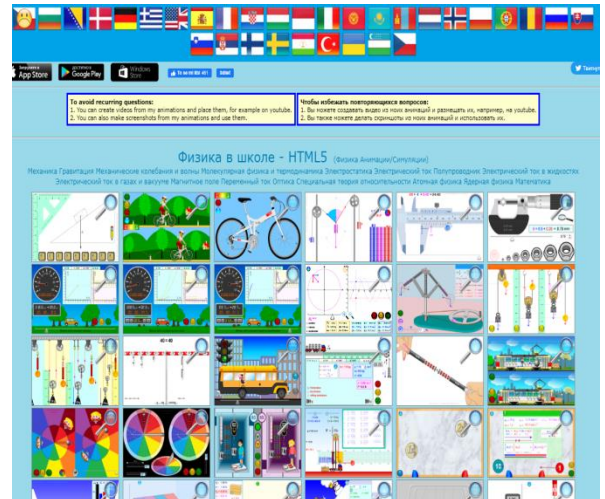
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ABSTRACT: This article describes the ways of effective use of information technologies to improve the quality and effectiveness of education in the school system.

KEYWORD: Crocodile.ICT, Crocodile Physics, Crocodile Chemistry, Phat Geogebra, Microsoft Mathematics, Live Geometriya.

Nowadays, digital knowledge and modern information technology are one of the most important conditions for progress. Digital technologies not only improve the management of the state and society and create great convenience for people in the social sphere. In addition, digital technologies create the basis for positive economic growth: increase the quality of products and services, and reduce the factor of human intervention. At the same time, the introduction of digital technologies in the educational system, in turn, opens up many opportunities in its system. Including: alternative forms of online, traditional and distance professional development in the system of advanced training, internet and distance education in schools, online, virtual education, virtual laboratories, 3D technologies give positive results in the educational process. Certainly, makes educational young people interesting to conduct educational processes, organize their free time in a meaningful way, perform important tasks in the madradli, effective use of technical means. The development of digital technologies requires the transition from the educational process, traditional education to the process of non-traditional education. That is, the use of digital tools in the educational process encourages educators to organize an environment that allows them to work practically, perform and work independently, increasing their activity. Let's cite the following online and offline sites and programs that provide such opportunities. From digital technologies in teaching exact and natural sciences, we can give an example of the following.



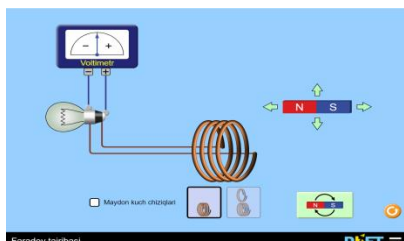
In teaching Natural Sciences <http://vascak.cz> virtual is a website designed to carry out laboratory classes online. The use of Natural Sciences in laboratory classes through this site has a great effect on the development of knowledge, skills and abilities in students in the educational process.

All subjects in the school education system are used online in the organization of interactive and multimedia learning modules in the educational process <http://learningapps.org> site through this site, students will have the opportunity to use practical tasks or prepare tasks, which students will be able to do independently.

All subjects in the school education system are used online, offline in the organization of interactive and multimedia readings in the educational process <http://maktab.uz>, <http://dr.rtm.uz> through its sites, there are lesson presentations for learning processes and video lessons, e-resources, tests and many other possibilities that students will be able to do independently.

Crocodile in the training sessions of the exact and Natural Sciences. The use of ICT, Crocodile Physics, Crocodile Chemistry, Phet, Yanka and other programs in virtual laboratories will have a great effect.

When teaching mathematics, work is carried out with examples, parables and graphs. Working with graphs and images of geometric spatial bodies, it is advisable to use



mathematical package programs when solving examples and parables. These are:”

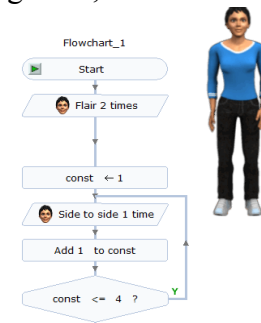
Microsoft Mathematics and others.

The Live geometry

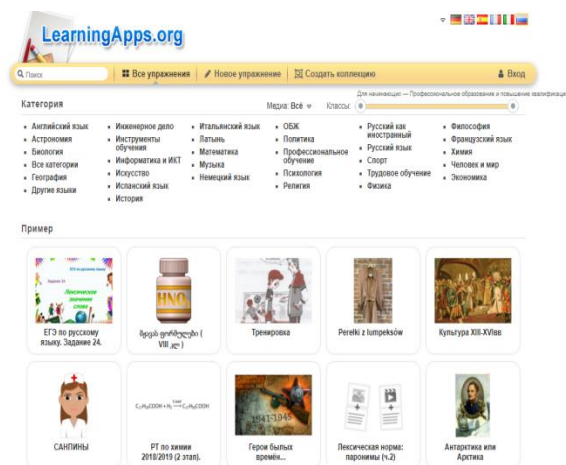
program allows you to create complex images and calculate its values, view geometric images under different degrees. In the upper classes, there are some problems in drawing spatial bodies in geometry with the help of a whiteboard and showing its sides, which gives them the possibility of implementing them with the help of practical programs of computer technology in the current digitization period.

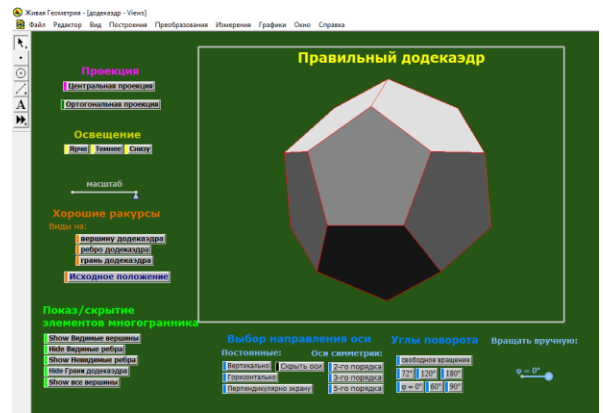
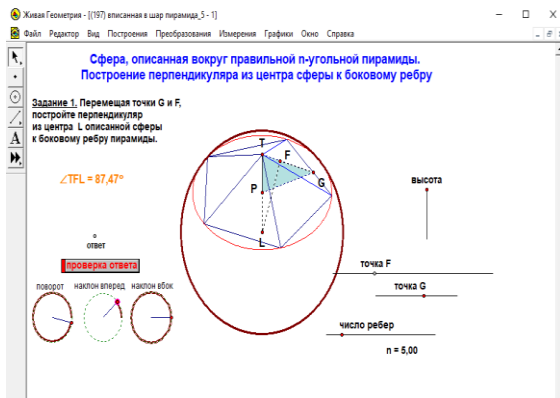
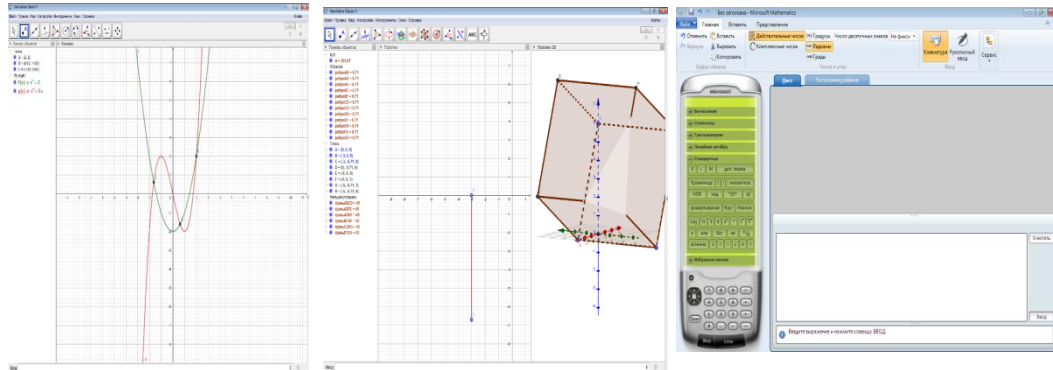
Substance	Mass(g)	Temperature(°C)
aluminium oxide	100.0	373.7
zinc oxide	100.0	373.7
silver	93.1	373.7
iron(III) oxide	84.3	373.7

Gegebra“,”



Berilganlarni kiritish: m1= m2=
 Olingan natijalar: a1= a2= T=





The organization of the above education through digital technologies will have a great effect not only in the development of knowledge, skills, skills and competencies in students, as well as in the course processes. Through the use of these tasks provides opportunities for solving problems in learning and organizing lesson processes in a meaningful and interesting way, as well as generating many ideas in students. Through the use of opportunities, it can become a solid foundation in the development of competitive mature personnel in future professional activities by meaningful Organization of students' free time, targeted, effective use of technical means, increasing computer literacy, developing logical, mental, creative thinking abilities.

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