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ORGANIZING PRACTICAL COURSES IN PHYSICS ON THE BASIS OF INFORMATION TECHNOLOGIES IN GENERAL SECONDARY SCHOOLS

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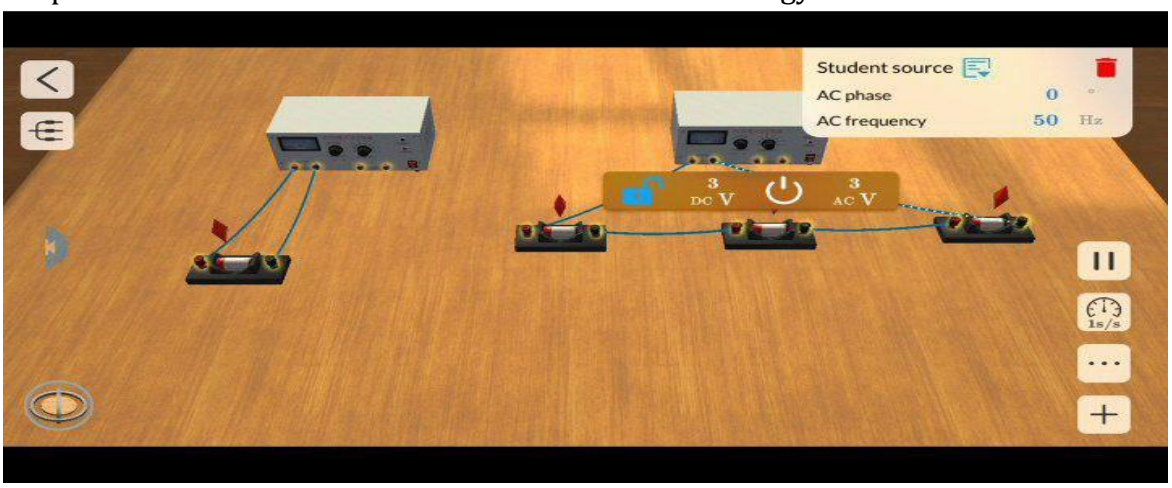
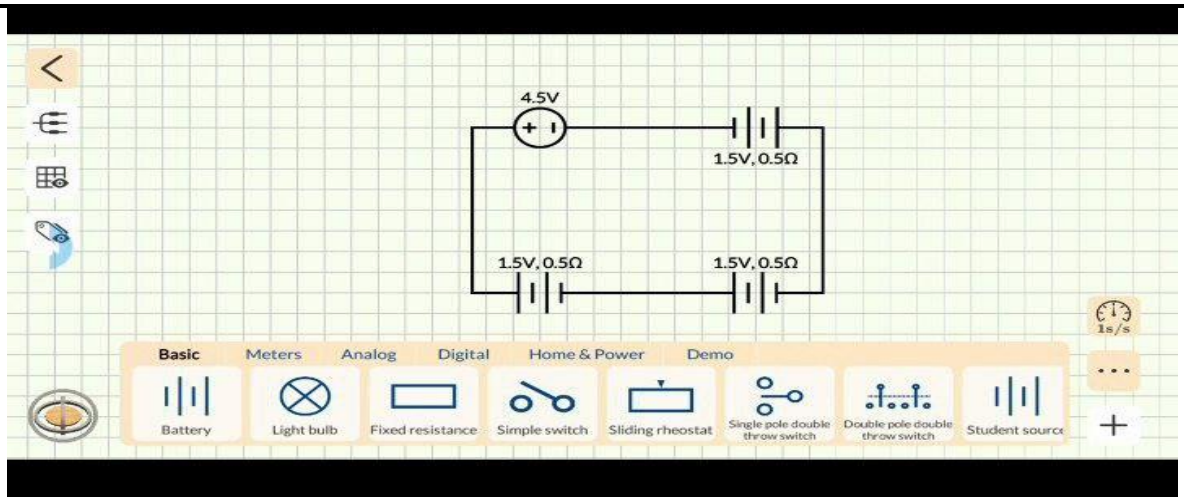
Annotation:
This article focuses on the transition of school physics laboratories in annuity and increasing mental, professional competence in students. Because, these electronic tools are used in teaching science in educational institutions to show physical processes, electronic textbooks, animations, virtual laboratories and experiments to students during the course of the lesson.

Keywords: Information technology, special programs, physical processes, electronic textbooks, MatCad, MatLab, Maple, Crocodile, Physics, Electronics Workbench

In the following years, in connection with the development of computer technology, new forms of organizing classes are being formed. Among them, one of the practical works that is widely used is the visual explanation of physical processes that are difficult to observe on a computer using special programs, through the means of electronic textbooks, animations, virtual experiments and presentations. Because, these electronic tools are used in teaching science in educational institutions to show physical processes, electronic textbooks, animations, virtual laboratories and experiments to students during the course of the lesson.

Information technology's grip is important in increasing students ' opportunities for independent education and reducing the problem of time scarcity. In the educational process, it is necessary to have certain conditions and technical means for organizing classes using modern information technology. In the educational system, multimedia e-learning literature, lectures are virtual laboratory works, homogeneous animated programs are special programs that will be needed when creating slides. The educational system has ready-made models in the above programs, in which the user can widely use several categories of work (Laboratory, in the analysis of fire safety issues, animations in presentation lectures) by entering the initial parameters. Examples of applications that enable modeling of physical processes include: MatCad, MatLab, Maple, Crocodile, Physics, Electronics Workbench, and other application packages. In understanding 8th grade school laboratories through the Physics Crocodile program, students gain experience performance skills, form exhibitionism traits, which form a certain level of competence in the student based on information technology.





The use of computer models in educational processes using the capabilities of information technology will pay off. The principles of application of computer models in educational processes are as follows: a computer program must be able to conduct an experiment; a computer program helps in determining the studied detail or in illustrating the issue being solved; as a result of the work, the listener must know the qualitative, quantitative connections of both magnitudes describing phenomena using the model; For computer modeling of physical processes, information technologist-yada physical knowledge is widely used. Also, the peculiarities of modeling are that it is not necessary to prepare various instruments, it will be able to describe phenomena in a lively and natural way, repeat the experience at any time in little opportunity, to be able to demonstrate even those processes that are difficult to observe and cannot be observed at all.

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