

## PRINCIPLES OF USING MODERN METHODS IN TEACHING BIOLOGY IN SCHOOLS

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**Abstract :** this article provides information on the use of new technologies in teaching biology. It is our main task to give students more knowledge by taking an interest in the lesson, and it is difficult for us to use the most modern technologies for this.

**Key words:** biology , technology, interest, laboratory.

What should be a model of a modern lesson? What should be its structure, form, methodology? What requirements should he meet? How many rumors, noise and controversy surrounding all this ... The results of the teacher's work are evaluated by the skills of his students, the level of students' activity in the lesson, the attitude of students to the subject, teacher, to each other, the educational and developing mobility of the person that arose during the lesson. As a result of my work at school, I came to the conclusion that good success in learning can only be achieved by increasing interest in my subject. To do this, I use modern pedagogical technologies in the classroom, including information and communication. Information technology training is a pedagogical technology that uses special methods, software and hardware (film, audio and video, computers, telecommunication networks) to work with information. Like all methods, teaching methods, teaching aids fulfill a trinity of didactic functions, which, in principle, remain unchanged in any subject teaching and perform threefold functions: training, development, upbringing in the framework of subject-related activities, taking into account the use of digital educational resources (TSOR) and information and communication technology (ICT) techniques. The use of ICT in biology classes can improve the quality of teaching a subject; to reflect the essential aspects of various objects, visually embodying the principle of visualization; to highlight the most important (in terms of educational goals and objectives) characteristics of the studied objects and natural phenomena. Teaching biology at school involves constantly accompanying the course with a demonstration experiment. However, in a modern school, experimental work on a subject is often difficult due to a lack of training time and a lack of modern material and technical equipment. And even when the laboratory laboratory is fully equipped with the required instruments and materials, a real experiment requires much more time both for preparation and conduct, and for analysis of the results of work. Moreover, due to its specificity, a real experiment often does not fulfill its main purpose - to serve as a source of knowledge. Many biological processes are complex. Children with imaginative thinking are hard at mastering abstract generalizations, without a picture they are not able to understand the process, to study the phenomenon. The development of their abstract thinking occurs through images. Multimedia animation models make it possible to form an integral picture of the biological process in the student's mind, interactive models make it possible to "construct" the process on their own, correct their mistakes, and self-study. One of the advantages of using multimedia technology in training is improving the quality of training due to the novelty of activity, interest in working with a computer. The use of a computer in the lessons has become a new method of organizing active and meaningful work of students, making the classes more visual and interesting. I apply ICT technologies at various stages of the lesson: 1) when explaining new material (color drawings and photos, slide shows, video clips, 3D drawings and models, short animations, plot animations, interactive models, interactive drawings, supporting material) as an interactive illustration

demonstrated using a multimedia projector on screen (currently this is relevant due to the fact that the teacher does not always have tables and diagrams); 2) during the independent study of educational material by students in the lesson during the execution of a computer experiment according to the conditions set by the teacher (in the form of worksheets or computer testing) with the result being a conclusion on the topic being studied; 3) when organizing research activities in the form of laboratory work in combination with a computer and a real experiment. It should be noted that when using a computer, the student gets much more opportunities for self-planning of experiments, their implementation and analysis of the results compared with real laboratory work; 4) during repetition, fixing (tasks with the choice of answer, tasks with the need to enter a numerical or verbal answer from the keyboard, thematic collections of tasks, tasks using photos, videos and animations, tasks with reaction to the answer, interactive tasks, supporting material) and control knowledge (thematic sets of test tasks with automatic verification, diagnostic tests) at the levels of recognition, understanding and application. When students perform virtual laboratory works and experiments at these stages of the lesson, the students' motivation increases - they see how the knowledge gained in real life can come in handy; 5) home experiments can be performed by a student on a worksheet with appropriate adaptation and if there is a training disc at home for this course. At the present stage of development of school education, the problem of the use of computer technology in the classroom is becoming very important. Information technology provides a unique opportunity to develop not only for the student, but also for the teacher. A computer cannot replace a teacher's living word, but new resources facilitate the work of a modern teacher, make it more interesting, effective, and increase student motivation to study biology. Advanced video technology and the use of specially designed computer graphics allow you to track the work of organisms as if from the inside, to discover their features and puzzles. What causes a great emotional uplift and increases the level of assimilation of the material, stimulates initiative and creative thinking. And the result is winners at the Olympics and rallies. Thus, the use of ICT in the process of teaching biology increases its effectiveness, makes it more visual, rich (the intensification of the learning process increases), promotes the development of various general educational skills among schoolchildren, improves the quality of education, and facilitates work in the lesson. The use of ICT in biology classes allows me, as a teacher, to keep abreast of the development trends of pedagogical science. To raise the professional level, broaden one's horizons, and most importantly, allows one to strengthen the motivation of learning by means of an active dialogue between the student and the computer, by orienting learning to success; learn basic knowledge in biology, systematize them; to form skills of independent work with a textbook and additional literature. Using ICTs, the source of information is not only the teacher, but the student himself.

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