



 Research Article

METHODS AND TOOLS FOR CAREER-ORIENTED TEACHING OF STUDENTS IN BIOLOGY CLASSES

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ABSTRACT

This article uses teaching methods to organize and manage students' learning activities, to work actively with school students who have a real interest in the biological sciences, to identify their abilities and personal preferences, as well as a profession that meets the needs of the city, district, village where they live. The right choice is achieved by building trust. Therefore, the teaching method is an expression of the methods of knowing the objective reality in the specific pedagogical conditions of the teaching process.

KEYWORDS

Method, learning-learning, learning-activity, career choice, group, environment, nature, individual, conversation, career guidance, education and upbringing, ability, profession, school, student.

INTRODUCTION

The word method is, in a general sense, a way to achieve a specific goal. Teaching methods are, in fact, a way for a teacher to convey knowledge to the minds of students and, at the same time, for students to master them. In didactics, teaching methods are

defined according to the following methodological and theoretical rules: the teaching method is an expression of methods of knowing the objective reality in the specific pedagogical conditions of the teaching process, ie using teaching methods to organize and



manage students' cognitive activity [1]. Teaching methods are one of the important components of the learning process. Implementing the goals and objectives of teaching without appropriate methods, it is impossible to achieve the mastery of the content of a certain amount of educational material by the student.

There are three main groups of methods for directing students from biology to the profession:

Methods of organization and implementation of educational activities (oral, visual and practical methods of teaching biology);

Biological games, educational discussions, creation of ethical and emotional situations in biology lessons);

Methods of monitoring the effectiveness of learning activities and self-monitoring (individual survey, frontal survey, oral test, written exams).

The presented methods cover the main components of the integrated activity (organizational, incentive and control). They integrate aspects of cognitive activity such as imagination, thinking, and practical application.

Each method of organizing educational activities, in turn, has an informational-educational, motivational effect. In this context, the motivational-motivational function of these techniques can be emphasized.

One of the most important goals of a school teacher's job is to help students define their life plans, create conditions for the personal development of the school student, and guide him or her to a career in biology teaching. This goal is achieved through a person-centered approach to the learner. The main idea of such a goal is to teach students to realize themselves, to think independently, to make important decisions for themselves by developing their intellectual and creative abilities, moral values.

In order to provide professional guidance to students in the process of biology education, it is important to organize business games, conversations with experts, excursions. We will look at them in more detail.

Depending on the number of participants, the following forms of vocational guidance work are distinguished:

- Individual, with a particular student, for example, conversation, counseling, individual diagnosis;
- Group, for example, lesson, game, conversation, group diagnosis, seminar, training;
- Work with a large number of students, for example, inter-school career guidance events, presentations of educational institutions, educational fairs

Passive forms of organization of vocational training in biology teaching. There are also passive forms of vocational guidance (study):

- Conversations, lectures, watching videos,
- Professional diagnostics, professional counseling for students.
- Visiting "professional fairs",
- Decorating the stands "Your professional future",
- Exhibitions of student creative work.

Active forms of organization of career-oriented teaching in biology teaching. Active forms of vocational guidance (in the field of training and development):

- Excursions of students to higher education institutions - excursions to educational institutions will be an opportunity to see the real conditions of the educational institution chosen for future study, get acquainted with its history and talk to students;
- Participation of students in master classes "Active testing" (demonstration of various techniques of



working with materials, participation in games, etc.) with the leaders of creative associations;

- Use of career-oriented role-playing games. Through the game, students are given the opportunity to "model", analyze and play real-life situations. During the participation of students in such games, children reveal their talents, learn to express their opinions, develop the art of public speaking and more.
- Thematic Week "The Ways We Have Chosen". Competitions in the following nominations can be held this week:
 - Presentation of professions;
 - Family professional tree;
 - Contest of essays and essays on "My chosen profession", etc.

Below we will focus on a few topics aimed at career guidance in teaching biology.

Lesson (8th grade).

Respiratory diseases and their prevention

Curriculum

(Topic: "Respiratory system", 8th grade)

OBJECTIVE

To study the diseases of the respiratory system and their causes.

Tasks: to continue the formation of the concept of "infectious diseases"; to provide an understanding of the threshold of infection, upper respiratory tract disease, pulmonary tuberculosis, and cancer; mention of the possibility of bacterial and viral transmission, risk and preventive measures, the role of fluorography in the detection of lung diseases; introduction to respiratory hygiene and respiratory gymnastics; give an idea of the vital capacity of the lungs and ways to increase it; Introduction to the professions of

radiologist, laboratory ecologist, sanitary doctor, pulmonologist and phthisiologist.

Course tools: tables with pictures of respiratory organs, blood circulation and lymph flow, endocrine glands; spirometer or its image.

Course process

I Knowledge check

The first student describes a cough reflex diagram on the board, the second student describes a cough reflex diagram, and the third student describes a cessation of breathing when entering cold water. Until they prepare a response, one of the students talks about reflex and humoral control of breathing.

II Study of new material

1. Repetition of material on infectious diseases and immunity (in the case of influenza and angina).
2. Talk about lung tuberculosis and cancer. The role of fluorography in the diagnosis of these diseases. In order to direct students to the profession, it is necessary to focus on the professions of pulmonologist, phthisiologist, as well as radiology, which detects pathology in the respiratory system; emphasis should be placed on the need for fluorographic research, radiology, computer scans, which require knowledge not only of biology, but also physics, chemistry, computer science (it is also possible to listen to lectures prepared by students).
3. Respiratory hygiene. Determining the weather. The effect of weight on the body. At the same time, in connection with air pollution, students can be introduced to the professions of laboratory technologist-ecologist, sanitary doctor; to tell about the differences in the training of sanitary and medical doctors and aspects of their work.



4. Measure the vital capacity of the lungs and talk about its importance (if possible, show the measurement process).

Homework III: Study § 26. Answer the following questions. Calculation of lung vital capacity. Measuring air pollution around your home.

Students who complete this practical work will gain more knowledge about the specifics of the work of a sanitary doctor and laboratory ecologist. Students should focus on the psychological and psychophysiological aspects of people engaged in laboratory research: orderliness, perseverance, meticulousness, conscientiousness, good eyesight.

Fresh air is needed for human health. Everyone should be in as much fresh air as possible. The city air is polluted with car exhaust, industrial waste, and a lot of dust. Dust particles itch the respiratory tract and carry many microorganisms.

Similarly, based on practical training, the student should be able to correctly represent the biological profession, protect the flora and fauna of the motherland, perform important practical work in the manufacturing industry, study the importance of invisible microorganisms for life, health. It is expedient to organize the education, training and training of mature people on the basis of such modern methods and means of education, who aim to achieve great success in the field of education.

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