



# PROFESSIONAL ORIENTATION OF PUPLS IN THE SECONDARY SCHOOL

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## ABSTRACT

*The article deals with the organization of vocational guidance in secondary schools, the formation of motivation in vocational guidance of students, the technology of vocational guidance in biology and extracurricular activities.*

**KEY WORDS:** *school, vocational guidance, content of vocational guidance of students, conditions, methods of work, career opportunities in the subject "Biology".*

## INTRODUCTION

Features of modern social economic situation, reflected in the instability of the labor market, the emergence of new professions and specialties, increased requirements society to the level of professional training require school graduates special responsibility and awareness when choosing future profession. Correctly chosen area of professional activity contributes to the formation of a harmonious personality, realization of her creative potential, as well as the process of social adaptation[1]. An important role in shaping professional intentions students are assigned vocational guidance as a purposeful activities to assist in professional self-determination in according to personal inclinations, interests, abilities and simultaneously with social needs.

The formation of interest in professions contributes to the development of a cognitive interest in subjects and an increase in the academic performance of schoolchildren. Therefore, vocational guidance work must be skillfully interspersed with lessons in all subjects and begin with elementary grades. However, there is currently no technology for choosing a training profile. Students often do it intuitively, under the influence of random factors. The development of ways to address this issue is one of the primary and urgent tasks of the school [2].

A contradiction arises: the lack of technology for choosing a training profile and professional definition of basic school graduates, on the one hand, and the need to make this choice, on the other [8].

Organization of work on vocational guidance of schoolchildren in many respects allows to resolve the contradiction that has arisen. Vocational guidance

at school is a part of the educational process and the leading role in it belongs to the subject teacher, who systematically and organically links professional propaganda with the content of the subject and contributes to raising the awareness of students about various aspects of the world of modern professions. [3]

## MATERIALS AND METHODS

The content of a modern school biology course has a great career guidance potential and allows them to acquaint schoolchildren not only with the currently relevant specialties of an ecologist, pharmacist, sanitary doctor, landscape designer, but also many others. That is why, one of the most important content components of vocational guidance work in the classroom can be considered professional education. A great contribution to this work was made by famous scientists and methodologists N.V.Muslimov, Sh.S.Sharipov, O'.Q.Tolipov, N.M. Verzilin, I.D. Zverev, M.I. Melnikov, A.N. Myagkova. They looked for ways to establish a connection between learning and work, biological science and production.

Vocational guidance work in the classroom should be aimed at acquaintance with professions, at the formation of a positive attitude of students to a particular profession, which consists in distinguishing it from a number of others and striving to learn more about it, that is, to contribute to the formation of primary professional interest. In the course of vocational guidance, the concept of profession and specialty is introduced, the classification of professions is explained, and professional goals and



motives are determined. Attention is paid to the classification signs: purpose, subject, means of labor.

We explain to students that the goal of work is the result that society requires or expects from a person. The subject of labor is a system of properties and relationships of things, phenomena, processes that a person of a certain profession must mentally or practically operate (for example, the subject of labor of a soil ecologist is soil, its properties and the entire living population of the soil environment). Means of labor are objects, things with the help of which a person affects the object of labor. It is important to characterize the concepts of professional goal and professional motivation, i.e. what for and for what a person chooses a certain specialty. Such work with concepts will allow in the future to more consciously get acquainted with the content of professional activities related to biology.

Career guidance in biology lessons in grade 5. Introducing schoolchildren to the kingdom of bacteria and their role in nature and human life, be sure to tell about the specialties of a microbiologist, biochemist, phthisiatrician, sanitary doctor, infectious disease doctor, pharmacist, livestock technician, soil scientist or agroecologist. In the process of studying mushrooms and lichens, introduce children to their distinctive features, reveal their significance in nature and human life and introduce them in absentia to the professions of a mycologist, pharmacist, doctor, ecologist, and also tell about the specialties of an agronomist in plant protection, agronomist - agrochemist - soil scientist, engineer, technologist of chemical, food and perfumery industries.

At the introductory lesson when studying the course "Plants. Bacteria. Mushrooms. Lichens" should focus the attention of students on the great practical importance of biological knowledge, emphasize their need for many types of professional activities.

In the topic «External structure and general characteristics of plants», revealing the importance of plants in human life, you can acquaint students with the professions of a pharmacist, phytodesigner, landscape architect, forestry engineer, plant cultivation master, gardener, breeder, ecologist, and biology teacher.

When studying the topic «Cellular structure of plants» while studying the structure of a plant cell and the life processes occurring in it, it is necessary to teach schoolchildren not only to use magnifying devices, but also to tell about the profession of a laboratory assistant, biologist. In the course of studying the topic «Organs of Plants», introducing students to the external and internal structure of plants, introduce them to the professions of an agronomist, soil scientist, gardener, florist, breeder, landscape architect and engineer of forest

park economy. (Appendix 2) While studying the topic «Basic life processes of plants», introducing students to the basic life processes of a plant, revealing the essence of soil and air nutrition of plants, tell us about the specialties of an agrochemist, agroecologist, chemical production operator, biochemist, ameliorator, soil scientist, gardener, breeder, florist, an ecologist or a lawyer - an ecologist.

When studying the topic «Diversity and Development of the Plant World», try to introduce such professions as an agronomist, biologist, doctor, hydrobiologist, forester, gardener, vegetable grower, gardener, breeder, pharmacist and ecologist. In the process of studying the topic «Historical development of the plant world», while forming concepts about the evolution of the plant world, introduce students to the profession of a scientist - paleobotanist. Introducing the diversity of cultivated plants and their centers of origin, remind once again about the breeders and tell us about their contribution to the creation of a huge number of different varieties of cultivated plants. It would not be superfluous to say that in order to achieve success in this type of activity, it is necessary to love and understand nature, have good health, be ready for difficulties and not wait for quick results. To maintain and develop a positive attitude towards work, invite students to find proverbs and sayings about work. In the process of conducting lessons on the topic: «Natural communities», inform the students about the profession of a gardener, a master of plant growing and tell about the specialties of flower growers - decorators, flower growers - vegetable growers, landscape architect, agronomist - agrochemist - soil scientist, agronomist-agroecologist, agronomist for plant protection. Explain that natural resources serve people as long as they take care of them. People choosing these professions have to work in difficult conditions, but only thanks to them natural resources are conserved and effectively used.

The school course in zoology, studied in grade 7, contributes to the acquaintance of students with a wide variety of professions and, of course, with the profession of a biology teacher.

When studying general information about the diversity of animals, about their life and science about them, introduce schoolchildren to the professions of a biologist, doctor, huntsman, laboratory assistant, veterinarian, sanitary doctor, ecologist, etc.

When completing a topic on protozoa, tell your children more about the profession of a veterinarian, sanitary doctor or infectious disease doctor, parasitologist or protozoologist.

Introducing students to coelenterates and molluscs, mention the profession of a doctor and



diver, scuba diver and hydrobiologist, as well as their research work in the underwater world.

Studying the different types of worms, tell us more about the specialty of a veterinary and sanitary doctor, helminthologist and hirudologist.

In the process of studying the topic of arthropods, introduce the students to the specialties of entomologist and parasitologist, sanitary doctor and neuropathologist, beekeeper and pharmacist, plant protection agronomist and ecologist.

During the passage of the topic dedicated to chord animals, introduce students to such specialties as a veterinarian, zootechnician, zoo engineer, ornithologist, herpetologist, ichthyologist, fish farmer, breeder, archaeologist, paleontologist, employee of the zoological museum, huntsman, ecologist, etc.

When telling students about the listed professions, be sure to pay attention to the fact that they will have to deal with living beings who will need their love, attention and patience.

Finishing the study of the course «Animals» with the topics of natural communities and the development of the animal world, once again remind about the professions related to animals and their protection, as well as the importance of the profession of a school biology teacher. Report that the scope of the biology specialty is wide. Teachers can teach in lyceums, colleges, not only biology, but also gardening, agronomy, ecology, etc.

In the process of studying the school course «Man and his health», students can be introduced to various specialties of the medical profession.

In the introductory lesson, be sure to introduce the concepts of profession and specialty. The concept of specialty is interpreted as a limited area of application of the physical and spiritual forces of a person, giving him the opportunity to receive the necessary means of subsistence in return for the labor expended. A profession should be understood as a group of related specialties, for example, an ophthalmologist, a general practitioner, etc. All these specialties are combined into one group, designated as a “medical profession”. [4]

When studying the musculoskeletal system for career guidance, introduce students to such specialties as a radiologist, an emergency doctor and a surgeon. Acquaintance with first aid techniques for sprains, dislocations and fractures, as well as with the techniques of applying a splint, helps in the formation of professional skills that can later be used in work. To broaden their horizons, invite students to make reports about modern methods of fracture treatment and the contribution of N.I. Pirogov in traumatology.

In the lessons when studying the topic «Internal environment», be sure to acquaint

schoolchildren with such a branch of medicine as immunology, with diseases of the immune system, the achievements of immunologists, which allow organ and tissue transplantation; Tell us about the prospects for the development of immune engineering, attempts to create a vaccine against cancer and AIDS. Inform students about the contribution of I.I. Mechnikov in the development of the doctrine of immunity, the invention of the smallpox vaccine by E. Jenner, and the vaccination against rabies, developed by L. Pasteur.

In the lesson on the topic «The value of blood and its composition,» tell us about the specialty of a hematologist, laboratory assistant, medical assistant, laboratory assistant, who conduct a study of biological material in clinical, biochemical and bacteriological laboratories. At the same time, be sure to emphasize the importance of laboratory diagnostics, since often the test results say much more about the patient's condition than all other data about him. Let the students know what the doctor can learn by examining the blood formula. Invite them to examine under a microscope a micropreparation «Human blood smear». This contributes not only to the improvement of the skills of students to work with a microscope and the assimilation of the necessary knowledge, but also to the formation of professional skills that can subsequently be used in their working life. flaccidity.

In the lessons on the topic «The movement of blood through the vessels» and «First aid for bleeding», offer to study the methods of medical care for different types of bleeding, try to measure blood pressure, ie. develop stable skills in schoolchildren that can be applied in everyday life and in the future professional activity of a health worker.

In the topic «Respiratory system» in the lesson «Diseases of the respiratory system», draw the students' attention to the importance of the work of pulmonologists and phthisiatricians, as well as to the specifics of the work of radiologists who detect pathologies in the respiratory system and in other organs; emphasize the need for fluorographic studies, fluoroscopy, computer scanning, where knowledge in physics, chemistry, computer science is required. Here, in connection with information on air pollution, introduce the profession of an environmental laboratory assistant, a sanitary doctor; at the same time, point out the differences in the training of sanitary and attending doctors, the specifics of their work.

It is better to learn the specifics of the work of a sanitary doctor or laboratory assistant-ecologist, the practical work «Determination of air dust content» helps students. Before performing this work, try to focus the attention of students on the psychological



and psychophysical qualities of people engaged in laboratory research: accuracy, perseverance, pedantry, special knowledge, conscientiousness, good eyesight.

The study of the topic «Urinary system» allows you to acquaint students with the specialty of a urologist and provides an opportunity to learn more about the work of a sanitary doctor and laboratory assistant.

Studying the meaning, structure and functions of the skin, students get acquainted with the specialties of a dermatologist and cosmetologist.

Acquaintance with the topic «Endocrine and Nervous System» helps to learn more about the work of a neuropathologist and school psychologist. In these lessons, it becomes possible to tell schoolchildren about the importance of the work of an endocrinologist.

Studying the topic dedicated to the senses and analyzers allows you to better acquaint yourself with the specialties of an ophthalmologist, ophthalmologist, otolaryngologist and a specialist in iridology.

When introducing children to various medical specialties, be sure to tell them about the importance of the work of junior medical staff, i.e. about the work of a paramedic, nurse, orderly and nurse. In order to develop interest in this group of professions, try to organize an excursion to the hospital or a meeting of schoolchildren with specialists from the polyclinic. During an excursion or meeting, children not only learn a lot of interesting things, but also receive more specific answers to questions related to a particular specialty.

The course «Fundamentals of General Biology» for grade 9 completes the study of the discipline «Biology» in the basic school. Therefore, in order to solve the most important task facing schoolchildren in choosing a profile of teaching in grades 10-11, it is necessary to pay more attention to career guidance work in biology lessons.

For the purpose of primary professional diagnostics, at the beginning of the school year, conduct a test that reveals the professional orientation of students (Methodology «Differential Diagnostic Questionnaire» by E.A. Klimov). This technique is quite effective, easy to process. It allows you to determine which of the five types of professions: «man - nature», «man - man», «man - technology», «man - symbolic force», or «man - artistic image» - each student belongs. It should be expected that in the future, children inclined to professions of the types «man - nature», «man - man» will choose a natural profile of education. Since it is in secondary school that personal orientations and value attitudes are intensively formed, an interest in the choice of a profession, and therefore in the choice of a profile

class, is revealed. Throughout the school year, I try to pay special attention to these children not only in the classroom, but also involve them in extracurricular, extracurricular and extracurricular work in biology.

In the introductory lesson, draw the students' attention to the fact that school biology has been and remains an important link in the general education system. She quite firmly holds her position, despite numerous attempts to combine it with other subjects in one «Natural Science». Indeed, it is difficult to imagine, say, a qualified doctor who studied some kind of integrated course instead of biology at school.

Studying the topic «Fundamentals of the doctrine of the cell» for the purpose of career guidance, try to acquaint students with the possibilities of applying the methods of molecular biology in human practical activity, primarily in medicine. Explain how doctors, pharmacists, biologists, and biochemists use knowledge about cells and tissues.

In the lessons on the topic «Reproduction and individual development of organisms» for vocational guidance, tell about the profession of an obstetrician-gynecologist, a doctor engaged in prenatal diagnostics, about specialists working with stem cells and conducting research work on cloning organisms, and also touch on the moral and ethical aspects of human cloning.

Introducing the topics «Fundamentals of the doctrine of heredity and variability», «Fundamentals of breeding plants, animals and microorganisms», inform students about the influence of genetics on other biological sciences; reveal the role of genetic engineering in biotechnology, agriculture, food industry, medicine, environmental protection. Introduce the professions of genetics, cytogenetics, microbiology, breeder, gardener, vegetable grower, florist, livestock technician, laboratory assistant, as well as various medical specialties.

Learn about the profession of an archaeologist, anthropologist, biologist, paleontologist, paleobotanist, guide and employee of a paleontological or local history museum helps students study the topics «The doctrine of evolution», «The origin of life and the development of the organic world» and «The origin of man».

In the classroom, when studying the topic «Fundamentals of Ecology», tell not only about the subject and the tasks facing ecology, but also emphasize the enormous importance of work to preserve the natural balance, harmony in wildlife. Along with this, be sure to note that new professions and specialties in the field of ecology are being created. The work of such specialists in modern society is extremely important and in demand. In this regard, educate students about the different careers in the field of ecology. Middle level: laboratory



assistants-ecologists, chemical production operator (with knowledge of the basics of industrial ecology). These specialties are new, they can be obtained in vocational schools. These specialists carry out laboratory analysis of the ecological properties of water, air, soil, they set up and maintain chemical and environmental equipment.

Having received an education in the field of ecology, one can become an ecologist, an agronomist-agroecologist, a technological engineer for laser technologies and environmental instrumentation, an environmental protection engineer in construction, industry, energy, water management, a specialist in radiation safety of the environment and humans, a lawyer- ecologist, etc. These specialties can be purchased in technical, legal and natural science universities. These professions require a solid knowledge of biology and ecology, as well as mathematics, chemistry, physics and social sciences.

Introducing students in the classroom to professions and specialties related to biology, be sure to tell them about the content of professional activity and professionally important qualities necessary for working in a particular specialty. This not only helps schoolchildren to get acquainted with the world of professions, but also helps to better determine the choice, since they form an idea of the ratio of the requirements of the chosen profession and personal data.

Since it is the course «Fundamentals of General Biology» that completes the study of biology in basic school, then at the end of the academic year a questionnaire can be conducted to determine the area of professional interests (methodology «Map of interests» by AE Golomshtok). This encourages schoolchildren to think about their future profession and helps to more accurately choose the profile of education in high school.

During the preprofessional It is planned to consolidate the formation of primary professional interest on a variety of professional materials for the development of 9th grade students. At this stage, a large role in professional self-determination is assigned not only to lessons, but also elective courses. A wide range of these courses helps to identify interests, check the capabilities of students. The content, the form of organization of these courses are focused not only on expanding the knowledge of students in a particular subject, but above all on organizing classes that contribute to the student's self-determination regarding the profile of education in high school, i.e. the main role of pre-profile courses is vocational guidance. They are short-term and alternating in nature, are a kind of training modules that help to expand the area of knowledge, create favorable conditions for the

disclosure of inclinations, abilities, creative individuality, promote professional determination and prepare for the choice of a biological profile of education, orienting the student to the professions for which knowledge of the school course in biology is required.

In order to form a conscious interest and personal readiness for the primary professional self-determination of students, one should not forget about work on vocational guidance outside the classroom.

## CONCLUSION

Professional self-determination of a person is an integral part of a holistic life self-determination, presupposes the mutual adaptation of personal needs and interests of modern society to solve the problems posed by the development of the socio-economic situation. A conscious choice of a profession is one of the most important conditions for the development of a person's very personality. A correctly chosen profession allows you to take your place in society.

Currently, it is the school that can help students choose a profession in accordance with their inclinations and abilities. Therefore, vocational guidance at school should become part of the educational process. The school psychologist should coordinate and direct this work, but the leading role in it still belongs to subject teachers. Only teachers can systematically and organically link professional propaganda with the content of the subject and contribute to raising the awareness of students about various aspects of the world of modern work. Shifting the emphasis in vocational guidance of students in basic school from extracurricular work to systemic work in the classroom contributes to the formation of cognitive interest in the subjects studied, professional self-determination and the choice of a profile of education in high school.

School biology has great career guidance opportunities. The implementation of vocational guidance in the classroom creates favorable conditions for the disclosure of inclinations, abilities, creative individuality.

Based on the above, we can conclude that vocational guidance work in the classroom in basic school is one of the forms of preparing students for specialized training in senior grades. The systematic use of vocational guidance in biology lessons contributes to the professional self-determination of students, orientation to the choice of a chemical and biological profile of education and an increase in the cognitive activity of students.



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