Practical knowledge and skills to be imparted to students in extracurricular activities in biology in secondary schools

Mammadova Khatira Agazar gizi1

1 PhD student of the Department of Biology and its teaching technology; Azerbaijan State Pedagogical University; Republic of Azerbaijan; Deputy Director; Heydar Aliyev High School; Republic of Azerbaijan

Abstract.
In parallel with the curriculum, the analysis of additional knowledge and skills related to the teaching of biology in extracurricular activities is included in the presented thesis. The practical knowledge and skills that will be given to the students in the extracurricular activities on the subject of biology in secondary schools are an additional support to the curriculum, both from a theoretical and a practical point of view. The thesis also presents information about the delivery of content in the form of results in national curricula. At the same time, a number of related examples are shown. The article mentions that a number of experiments and laboratory works are organized to teach students about biological processes.

Keywords:
theory of pedagogy
biology subject
secondary school
teaching
methodology
Formation of practical knowledge and skills in the teaching of biology is an actual problem. In order to solve the problem, the factors hindering its solution were investigated, the principles, methods and forms of imparting practical knowledge and skills to the students in the process of teaching biology were determined. In terms of modern requirements, the nature of practical knowledge and skills to be imparted to students was clarified. The principles of practical knowledge and skills to be imparted to the students were taken into account in accordance with their age level and covering the subjects of the subject [2].

National and biology subject curricula require students to be instilled with practical knowledge and skills. The requirements for practical knowledge and skills to be imparted to the young generation were clarified in these curricula. In those curricula, the content is given in the form of outcomes. For example, the main standard of the subject curriculum "Animals and environment" content line 4.2. Defined as "demonstrates skills related to environmental protection". Its sub-standards are: 4.2.1. It presents the information it collects about the protection of living things. 4.2.2. Listed as following plant and animal care regulations [1].

In order to teach students about biological processes, experiments and laboratory work are organized on determining the composition of a number of inanimate and living worlds, pest control, and the effect of chemical means that increase the productivity of plants. Chemical knowledge and skills are imparted to students in the organization, conduct and conclusion of such experiments. Chemical knowledge and skills are also referred to in teaching the chemical composition of the animal and human body, conducting experiments on the effects of chemicals on health.

Physical knowledge and skills are related to the role of physical factors, physical laws and regularities in biological processes in living things. For example, students acquire physical knowledge and skills in addition to biological knowledge and skills in conducting practical and laboratory works, experiments, and observations related to the study of biological processes such as photosynthesis, transpiration, movement of water and mineral salts, the effect of physical factors on living things, cell nutrition.
Students spend a certain amount of work on technological knowledge and skills in any biological experiment, observation, practical and laboratory, excursion, independent works, including projects, presentations, writing abstracts, preparing slides. They carry out any technical and organizational work, plant, breed, care for plants, take care of animals, help farm workers, participate in tree planting activities. In this way, students acquire labor-related, that is, technological knowledge and skills [3].

In the study of biological processes, students have the opportunity to gain practical knowledge and skills about the features of geographical factors affecting those processes. While observing the diversity of flora and fauna, they acquire knowledge and skills about the influence of terrain and climate on living things. By studying the role of geographical factors in the health of plants, animals and people, they acquire relevant practical knowledge and skills and refer to them in life.

In the teaching of biology, the economic importance of plants and animals is taught. In particular, they gain knowledge and skills about the productivity of plants and animals used in agriculture, ways of increasing it, creation of new, more useful, resistant varieties and breeds, agricultural fields, their development. Students acquire the aforementioned economic knowledge and skills through observations, practical work, and excursions in various fields of economy and agriculture.

References: