

## INDEPENDENT WORK ON BIOLOGY AND THEIR ROLE IN EDUCATION

Akbarova Gulbahor Olimovna

Associate Professor of Tspu Named After Nizami, Ph.D.

Khanimkulova Umida

A Graduate Student of Tashkent State Pedagogical University Named After Nizami

### Annotation

An important task of the school is to instill in students a conscious attitude to work, to develop the necessary practical skills, the desire for independent mastery of knowledge, interest in research, etc. School biological disciplines are of great importance in the formation of a comprehensively developed personality. Biology lessons, laboratory classes, practical work allow you to equip students with deep and solid knowledge about wildlife, as well as form their scientific and materialistic views on nature. The following article is devoted to the role of independent work in biology classes.

**Keywords:** biology, discipline, nature, plants, excursion, wildlife, environment, living organism.

### Introduction

The State Education Standards which is made up of biology, sets out the knowledge, skills, and competencies that students need to acquire, that are difficult for students to acquire during the course.

Therefore, the teacher should ensure that students acquire certain skills and competencies in homework and extracurricular activities, which are a necessary form of teaching.

Extracurricular activities play an important role in building these skills. Therefore, in order to develop the above skills in students, the teacher should organize homework and extracurricular activities as appropriate.

Homework is characterized by working with a textbook, reading additional literature, drawing pictures on a topic, making observations on natural objects, and putting in simple experiments.

Textbook homework is a form of organizing students to do the teacher's practical and textbook assignments independently at home, which is related to the subject of the lesson.

Most students do not know how to use textbooks properly, some students memorize assignments and topics from the textbook, and some learn topics superficially. Homework can be achieved only if it stimulates the student's thinking and stimulates

interest in independent work. To do this, any assignment should be expressed in the form of questions, in which students select the required material from it and prepare answers to it, without having to memorize the textbook text in order to speak in class. To achieve this, it is necessary to abandon the phrase in the textbook that says memorize or study this topic.

Biological excursions - a study of the habitat and related features of objects in a natural environment or artificially created conditions outside the school by the teacher, according to the curriculum with the class or a specific group of students is an important form of the educational process. It is known that biology as a science introduces students to nature, inorganic components of nature, changes in them and the specific life processes of living organisms, adaptation to the environment, ecological communities, the characteristics of metabolism and energy in them.

Under the guidance of the teacher to observe seasonal changes in nature, the diversity of living organisms, their adaptation to the environment, the study of forms of biotic communication between them. Excursions are organized to form knowledge, to get acquainted with the living conditions of living organisms in the natural environment. Excursions in general secondary schools can be one-hour, one-day, and multi-day, depending on the duration. An hour-long excursion is held in the school yard or on a training ground.

One-day excursion - a plan of excursions to nature, industrial enterprises, farms, zoos or botanical gardens, fisheries or poultry farms is approved by the head of the scientific department of the school.

A multi-day excursion is a complex excursion at the end of the academic year, which is conducted in conjunction with teachers of history, geography, linguistics, physical education or military education. The plan of a multi-day excursion is approved by the pedagogical council.

Excursion is an important form of teaching biology, which serves the following didactic purposes:

- The study of the structure of living organisms and the specific features of the functions of organs in relation to the environment allows students to study biological laws in terms of "nature-human-society" relations.

Effectively organized excursions, depending on the content of the studied topic, allow students to gain a deeper understanding of the peculiarities of the structure, development and vital functions of biological objects, to expand the scientific worldview. Communities of living organisms prepare the ground for imagining their composition, food chain, energy expenditure, matter in the biosphere, and energy metabolism.

The main form of teaching is the acquisition of theoretical knowledge by students in the classroom, their application in practice, the formation of conscious attitude to nature, observation, teaching and practical work skills.

All types of independent work used in the educational process can be classified

according to various criteria: by didactic purpose, by the nature of the students' learning activities, by content, by the degree of independence and the element of students' creativity, etc.

Depending on the goals, independent work can be divided into the following:

- Educational.
- Training.
- Fixing.
- Repetitive.
- Developing.
- Creative.
- Control.

1. Educational independent work. Their meaning lies in the independent fulfillment by students of the tasks given by the teacher in the course of explaining new material. The purpose of such work is the development of interest in the material being studied, the involvement of each student in the work in the lesson. When performing this type of work, the student immediately sees what is not clear to him, and he can ask for additional explanation of this part of the material. The teacher draws up a scheme for further explanation of the material, in which he prescribes difficult moments for students, which will need to be paid attention to in the future. Also, this type of independent work helps to identify gaps in the knowledge of past material among schoolchildren. Independent work on the formation of knowledge is carried out at the stage of preparation for the introduction of new content, also with the direct introduction of new content, with the primary consolidation of knowledge, i.e. immediately after the explanation of the new, when the students' knowledge is not yet strong.

2. Training independent work. These include tasks for the recognition of various objects and properties.

Training independent work mainly consists of tasks of the same type, containing essential features and properties of this definition, rule. Such work allows you to develop basic skills and abilities, thereby creating a basis for further study of the material. When performing training independent work, the help of a teacher is necessary. You can also allow the use of a textbook and notes in notebooks, tables, etc. All this creates a favorable climate for weak students. In such conditions, they are easily included in the work and perform it. In training independent work, you can include the performance of tasks on multi-level cards. Independent work has a significant impact on the depth and strength of students' knowledge of the subject, on the development of their cognitive abilities, and on the pace of assimilation of new material.

3. Fixing independent work. These include independent work that contributes to the development of logical thinking and requires the combined application of various rules. They show how well the educational material is mastered. Based on the results

of checking tasks of this type, the teacher determines the amount of time that needs to be devoted to repeating and consolidating this topic. Examples of such works are found in abundance in the didactic material.

4. The so-called repetitive (review or thematic) works are very important.

5. Independent work of a developing nature. These can be tasks for compiling reports on certain topics, preparing for Olympiads, scientific and creative conferences, holding entertaining biology days at school, etc. In the classroom, these can be independent work that includes research tasks.

6. Students are of great interest in creative independent work, which implies a fairly high level of independence. Here, students discover new aspects of the knowledge they already have, learn to apply this knowledge in unexpected, non-standard situations. In creative independent work, you can include tasks, during which you need to find several ways to solve them.

7. Control independent work. As the name implies, their main function is the control function. It is necessary to highlight the conditions that must be taken into account when compiling tasks for independent examinations.

## **Conclusion**

Firstly, control tasks should be equivalent in content and scope of work; secondly, they should be aimed at developing basic skills; thirdly, to provide reliable verification of the level of knowledge; fourthly, they should stimulate students; allow them to demonstrate all their skills and abilities.

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