
METHODS FOR FORMING AN ECOLOGICAL ATTITUDE TO BOTANY IN STUDENTS OUTSIDE CLASS TIME AT SCHOOL

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Abstract

This article provides information about extracurricular activities aimed at studying botany, developing environmental awareness and stimulating students' interest in using new methods and approaches in acquiring knowledge in the field of botany. The article discusses the goals, content and other aspects of this extracurricular activity, and also provides explanations for young people in order to expand their understanding and awareness of environmental issues.

Key words

world of plants , ecological knowledge, excursions, botanical garden , elective classes.

Forms of extracurricular work in botany can be different depending on its purpose and content. The most important thing is that each form is capable of shaping students' interest in knowledge.

The organization of independent work of students outside the lesson is directly related to the teacher's teaching methods in the classroom, the reason for which is determined by the lack of educational material and the level of knowledge of botanist students.

Methods that take into account the level of knowledge of students in botany: observation, distinguishing plant species, external characteristics, distinguishing their natural conditions, working with literary herbs and other methods.

An important task in extracurricular activities of students is to recognize hanging plants in natural conditions by their external signs. Studying, under the guidance of a teacher, the territorial nature of the area where they live and the world of plants found in it is the basis for their acquisition of environmental knowledge. The botany curriculum lays down the basic principles of recognizing

and distinguishing natural plants. This principle is taken into account when organizing extracurricular activities. In lessons and extracurricular activities, attention is paid to the interdependence of the living conditions of animals in nature.

The organization of group and private observations of trips, hikes, collection of botanical materials and herbariums, filling out diaries, botanical clubs, and studying the plants of the students' area of residence were formed.

Under the guidance of the teacher, students see with their own eyes nature, industrial sites, parks, greenhouses and greenhouses, learn about their natural conditions and their influence on plants, and the set of concepts they acquire is an important form of environmental education. knowledge.

Excursions organized according to the lesson program reinforce the lesson material with experience; trips outside the program are primarily of a research nature. Depending on the quality of the study of the material, tours can be thematic and comprehensive, depending on the location of the object, short-term and long-term.

The trip is carried out in three stages - preparing the teacher and students for the trip, conducting the trip, processing and finalizing the collected materials.

At the first stage, the teacher chooses the topic, goals and objectives of the trip, plan and location. The teacher must study and prepare materials that are planned to be used during the trip, if possible, consult with specialists and take into account their suggestions in the process of organizing the trip. During a botany lesson, the teacher introduces students to the topic of travel, determines its goals, and, with the participation of students, checks the necessary equipment and its suitability. Students carefully prepare for the trip and familiarize themselves with relevant literary sources. They become familiar with the methods used in travel. It is organized that students prepare the necessary food. Naturally, in institutions, students are guided by certain moral rules and comply with them.

During the trip, information is collected and planned activities are carried out. Information consists of conversations between a teacher, an expert, a guide and students about a specific object . Work during the day included photographing, collecting materials and herbariums, describing and performing other tasks at botanical sites.

The teacher and students review the results of the work and draw a conclusion. During the trip, the plan and what tasks the students will perform will be determined. In the Botanical Garden, students prepare their collections of materials, albums, diaries, photo booths , and report on the work done.

Walks are long-term in nature and are a way for students to organize good rest. During walks, students get acquainted with the life and national culture, nature and flora of their native country . These events awakened in him a love for his native land .

Walks in nature are divided into one day and several days. Students go on day trips, usually on Saturday, under the guidance of a teacher. Such walks will expand students' knowledge of botany and help them collect knowledge of botany for use in their studies. Day walks focus on a specific theme. On holidays, multi-day walks are held. Its implementation requires a lot of effort .

The purpose of the walk is education, social activities, and health promotion. The educational purpose of the walk includes getting acquainted with interesting places and conducting complex botanical observations.

The teacher plans a walk, determines its theme, direction, and develops a route. The goal is to acquire a certain amount of knowledge while studying the area where the walk is organized. For the march to be successful, it is important to maintain order and daily routine, have special tasks for each march participant, create conditions of trust , friendship, partnership, mutual assistance , work during the march and training .

trips are widely used in extracurricular activities; complex educational tasks are solved during walks.

The theme of the trip is developed by the teacher. Student trips may be organized to complete plant science assignments. These tasks include monitoring natural phenomena, Oz herbology exhibits, herbarium corners and the museum. In some schools, young nerds have become a program. They complete the work done this year and contribute to the development of plant science and tourism.

The botany teacher prepares and organizes students for the meeting. The holding of various competitions determines the main content of tourism sleds. In this regard, during sledding, young tourists get acquainted with the flora of their native country, explore the surrounding natural objects with the help of maps and compasses, climb mountains, and perform nature conservation tasks .

Botany courses are a common form of extracurricular activity. As a result, they are active and independent. develops, students' interest in knowledge increases, and it becomes possible to deeply study a topic that interests them.

Preparing clear assignments for each member of the class is an important part of the work, and theoretical and practical work must be carried out in the class so that the students' interest in the preparation does not decrease.

According to the content, types of books : according to interests , the main task of the books is to attract students to the study of botany , to arouse interest in science. The content is compatible with the main course program. Improving the knowledge and skills acquired by students during the lesson is the task of these teachers. Students are offered practical assignments that develop their knowledge, skills and abilities on some important issues of the program. The lessons are aimed at a detailed study of some of the issues studied in the lessons, for example, plant physiology , the study of human problems . They help study a small branch of botany called crop plants.

Students in the first group show a strong interest in studying botany and other subjects.

In the second group of classes, the knowledge gained in the lesson is improved . To preserve the interests of the botanical objects and natural phenomena being studied, it is necessary to use interesting elements - competitions and forms of games.

The third group of togaraks provides great opportunities for students to form and develop students' understanding of the importance of botany.

The fourth group is devoted to special issues that will benefit students in interesting work . There are ample opportunities for developing students' creative activity. Organizing a curriculum begins with identifying students' interests, talents, and skills . If the work plan is organized, its effective implementation will be ensured. The school's work plan provides for the completion of various tasks for students.

In school practice, elective lessons have an important connection with the content of the main subject program. The unique feature of the method of organizing and conducting elective classes has an impact on the development and improvement of course teaching and on increasing student interest.

Involving various specialists to conduct elective classes is of great interest to students. These lessons are necessary and useful. The importance of environmental education lessons deepens students' knowledge compared to the program and develops students' learning ability. Nature conservation electives convince students that it is impossible to organize the protection of their native country without studying its flora.

The purpose of organizing electives in botany is to popularize knowledge in this area, to show the importance of botany in life, to deepen the economic, environmental and aesthetic knowledge of students.

In botany, electives form different views of the world, give students knowledge about the laws of botany, the development of agriculture, and help solve life problems by summarizing various botanical information.

Electives are closely related to natural science classes, improve their quality, and have a developmental impact. In elective courses, it is necessary to rely on plant growing materials; when organizing them, it is useful to use lecture and seminar methods.

In most schools in the republic, botany teachers organize museums of various profiles: natural history museums, herbarium halls, nature corners and various other museums.

The school museum is a source of environmental knowledge in the development of students' creative independence in the collection and research, preparation, design and promotion of environmentally significant materials on the development of nature and the history of society.

Collection and search are carried out during the organization of the Botanical Museum. These activities form the basis of the organization of the Museum of Social Sciences. The work must be carried out on the initiative of students in close connection with their studies.

In the work of a botany teacher, great importance is attached to cooperation with guides and lecturers. Therefore, it is necessary to pay great attention to their selection and preparation. The botany teacher prepares a work plan, helps in conducting interviews, selecting literature, and compiling materials. Attention is paid to the connection between the work of the botanical museum and the educational process. What exhibits, what lessons and what topics are planned to be used in the immediate museum premises? These data are taken into account when drawing up the teacher's thematic plan for pilot lessons.

Trips to the Museum of Natural History are organized with the aim of deepening the knowledge gained in botany classes and getting to know the useful plants of their native land. To organize classes in the museum, they get acquainted with its exhibits. Additional consultations on necessary topics will be obtained from museum staff, the procedure for viewing exhibits will be determined, the necessary display cases will be determined, and relevant literature will be selected and analyzed.

Seventh graders will have to complete specific tasks. The purpose of museum lessons is to evoke a feeling of desire to preserve and increase the beneficial medicinal properties of the Republic of Uzbekistan, the country, and to evoke a sense of pride in them.

Pay attention to useful plants found on the territory of the republic and the country of origin of teenagers, to the variety and color of useful plants, writing them down, showing which ones they like and which they don't like, what they think about the museum activity. , what other factories in the country are thinking about, learning problems are solved by reporting, recording unfamiliar new terms and analyzing them.

The child began to become acquainted with the useful plants of the plant region in the 6th grade. They must be fully and comprehensively prepared for 7th grade. For this reason, it is important to develop in them feelings of joy, attentiveness and love for the world of plant wealth, as well as to form ecological ideas about the plant wealth of Oz. The topic cannot be limited to classroom teaching, but it is important to organize it in relation to practice.

In the museum, students listen carefully to the teacher, identify plants using cards, pictures, herbariums, the lesson is interesting and understandable to students, they are asked the following questions:

Show desert climate plants on a map?

What are the differences in the ecological conditions of hanging plants in water and desert ?

In which areas is the forest zone common?

What plants does the flora of the region where he lives consist of ?

Such methods activate students' thinking and observation skills and require them to concentrate. Students write and illustrate during class. Homework is given: write a short conversation about what you liked during the museum lesson and what new things you want to learn in the future.

From the students' responses, it is clear that they liked and appreciated the museum's activities: "In the museum, we got acquainted with the rich flora of our country, saw and observed them with our own eyes, and even held them in our hands and studied them," which increased my interest in botany during the visit museum. "Before I was not interested in botany, I became interested in museum activities."

New information is a necessary factor to arouse the interest of students, and the need for knowledge must be immediately satisfied with new information.

The results of our work are increasing students' interest in botany, perception of botanical objects and phenomena, real life and assessments, and expression of opinion. Students got acquainted with the diversity of plants in the place where they were born, tried to identify the collected materials, various medicinal plants, and carefully examine them.

A practical lesson, organized in natural history and science museums, shapes people's ecological attitude towards the environment. Botanical clubs and herbarium halls are promising and interesting forms of extracurricular work for schoolchildren. Their difference from other forms lies in attracting students of different ages, various specialists, providing extensive information, and establishing connections with other organizations.

Activities of the club: nature lovers club, interesting meetings club, film excursions club.

Nature conservation clubs unite everyone who is interested in protecting plants and animals in nature. When organizing these circles, the cooperation of teachers of botany and general biology is necessary.

Tourist - local history clubs unite people interested in the nature and history of their homeland, who go on walks and travel. Teachers of botany, history, geography and physical education participate in the organization of circles of this type.

The club of interesting meetings has different themes. They will hold meetings with scientists, specialists, cultural and artistic figures, pioneers of the country and people of rare professions.

In club forms of extracurricular work, more attention is paid to the practical work of students, their socially useful work, theoretical methods of working with botanical literature, and identifiers.

At each lesson in circles, it is necessary to show slides, films, filmstrips and analyze the results of each lesson.

The Science Olympiad is a unique form of extracurricular activity that develops students' interest in botany. The general work of these students is carried out by students from the School of Botany. Its goal is to attract a large number of students outside the science lesson, increase their interest in environmental issues in the botany lesson, and develop the ability to conduct independent work. Along with developing interest in learning, Olympiads help students study botany in depth and choose a future profession. Botanical Olympiads should put an end to extracurricular activities. Before the Olympiads, preparation is carried out, which helps to organize educational work, increase knowledge in the natural sciences, and arouse interest in botany.

Preparing questions and tasks is an important stage in organizing the Olympiad. When preparing questions, attention is paid to connections with the main reading material. When organizing Olympiads, tasks should be meaningful,

specific, non-standard, and students should positively use their knowledge in new conditions.

It is necessary to ensure that all participants in the preparation and conduct of the Olympiad undergo a knowledge test under equal conditions. Attention is paid to the equal age of the Olympiad participants: they must be able to think comprehensively, answer questions, and use their knowledge widely and clearly.

The Olympic Games can only achieve their goals if they are not held formally, but are conducted continuously and in an orderly manner. The questions may include the task "Do you know the necessary and useful plants from the plants found in your place of residence?"

Among all subjects, the knowledge of secondary school students is tested annually, including botany. These knowledge tests are carried out on the basis of plans and orders approved by the Ministry of Public Education of Uzbekistan and the Ministry of Public Education of the Republic of Karakalpakstan.

According to the competition regulations, the Olympics will be held in four stages:

Schools of the I level, District - II level, Region - III level and IV level belong to the republican type.

Questions and tasks of the Olympiad are corrected by specialists from republican and regional educational centers. At the same time, students' knowledge in subjects is tested.

But until now, Olympiads in natural sciences were held only within the framework of programs and textbooks. In our opinion, Olympiad questions and assignments in botany should be enriched with interesting and local materials. In Olympiad questions, attention should also be paid to students' environmental knowledge. Using materials from Russian history, literature and art to include environmental tasks in Olympiad questions has little effect.

On the opening day of the Olympics, teams prepare musical compositions and congratulations. When organizing this training, the botany teacher, group leader, literature, music and visual arts teachers must work together.

"Hello to young botanists of Karakalpakstan"

(greeting)

a) within the allotted 10 minutes, introduce the features of the nature of Karakalpakstan, its ecology, cities and villages, underground and surface resources, issues of environmental protection:

b) congratulatory speech material: documentary articles on botany published in newspapers and magazines of Karakalpakstan, written on the problems of the

Amu Darya and Arol , literary and lyrical works, mainly about nature, and the preparation of an artistic composition from them:

c) other competing teams will express their wishes to the young nerds.

The greeting is the main part of the composition. It is necessary to have artistically specific examples and songs that can fully describe Karakalpakstan. Adding national songs and songs to the greeting increases its effectiveness.

As part of the questions and tasks of the Botanical Olympiad, scientific and practical, long-standing tasks should be combined with local materials, literature and works of art.

Questions for Class IV (Sample Example)

1. Tell us about the h-cell of plants. How many parts does a cell consist of?
2. What are the characteristics of plant species and animal species ?
3. Who first introduced the concept of a cell to science?

VII Questions (Sample Example)

1. What does plant taxonomy teach?
2. What plants are open-seeded ?
3. Which plants are classified as closed seed plants.
4. Give examples of monocotyledonous and dicotyledonous plants.
5. Which plants are classified as agricultural plants.
6. What is the importance of bacteria in nature and agriculture?
7. What is the importance of mushrooms and aquatic plants in the national economy?

Extracurricular work in botany takes place in the form of parties, conferences, resourceful, dexterous and intellectual circles. In these forms of work, events may be dedicated to holidays and celebrations. Representatives of different ages and different groups can participate in them . They can be prepared through the efforts of teachers of various subjects.

Botanical evenings are held as part of an event or week.

We recommend the following general guidelines for preparing botanical evenings:

- Decide on the theme of the evening.
- Selection literature on the topic .
- Script writing

Organizing art evenings on botany is not easy. In our opinion, it is very important to organize botanical evenings as planned once a quarter to increase the

interest of students, instill in them a love for the Motherland, a sense of relationship to their native land.

When preparing and conducting botanical evenings, the science teacher must work effectively with students in class and outside the lesson, consult with teachers of the school's native language and literature, music and fine arts.

The exchange of content and forms of activities will lead to the formation of students' attitudes towards nature and the acquisition of a certain amount of environmental knowledge. Students were provided with a deepening of knowledge and understanding of botanical objects and plants in nature. Extracurricular activities aroused teachers' interest in botany and the practical application of acquired environmental knowledge, knowledge and skills.

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