Published Date: - 10-11-2023
Page No: - 39-42

ISSUES OF ORGANIZING BIOLOGY TEACHING IN THE PROJECT METHOD

L.M. Karakhanova
Department Head, (Phd) Senior Researcher Uzpfiti "Teaching Technologies Of Natural Sciences", Uzbekistan

ABSTRACT

The method of using projects and directly developing it in the study of biological science is one of the younger educational methods compared to other science methods, and today it can be considered as a method and technology that is just entering general secondary schools. At the moment, the introduction of project methods using electronic tools and mobile devices indicates that great attention is being paid to this educational method.

KEYWORDS: research, project method, educational tools, biology, continuous education, students, lesson, extracurricular activities, project organization, project execution stages.

INTRODUCTION

In mastering biology and studying scientific information and knowledge about living nature directly, it is impossible not to accept theoretical knowledge without seeing or knowing its practical results, in short, not to develop skills. It is known that all the practical activities related to biology, which serve to master it, serve to develop the skills of using biological knowledge in a person's daily life.

Today, it is recommended to use several methods of project technology in order to create practical skills in the student, to turn his research skills into competence. The use of educational scientific projects of various forms in the process of studying biology by students ultimately helps students to better understand, understand, and imagine many biological processes and laws within the subject, as well as science. "makes it possible to learn."

The main goal of any scientific research project recommended for use and research by students is focused on the formation and development of basic and scientific competencies. It includes several stages that begin with the prediction of students' personal characteristics, including their biological knowledge, skills, and knowledge that will be generated in relation to the studied object or subject of new content. There are several types of scientific research projects carried out by students:

1) Practice-oriented project - is aimed at the social interests of the project participants, the planned and collected scientific product is predetermined and its use in classroom or school life is assumed. That is, the short-term or long-term projects selected by the students are planned to ultimately make a unique contribution to the future of the class or school (for example, creating a living corner in the classroom during activities in small groups, organizing an aquarium for fish in the school foyer, school (including small scientific projects such as breeding medicinal plants in an experimental plot).

2) Scientific research project - that is, a research method formed on the basis of small scientific research requirements. It includes justification of relevance of the topic chosen by the student,

determination of research goals, mandatory formation of hypothesis with further investigation and discussion of obtained results. The methods of modern science are used in this: that is, it is assumed that the results of research work will find their confirmation on the basis of laboratory experiments, modeling, sociological survey, etc.

3) Creative or creative projects - the preparation and implementation of such projects is often done in small groups or at the discretion of the student. A unique creative approach is required in the presentation of research, studies and analytical results with the help of a teacher. In this case, the resources prepared by the project performers may consist of almanacs, games, works of visual or decorative art, and products featuring video materials.

4) Information project - that is, a project based on collecting information about an object or event for the purpose of studying, analyzing, summarizing and presenting information to the general public. The preparation of such a project and its main results are announced to the public in the form of information. The scientific research result of such a project can serve to create an information environment for a classroom or school.

When creating any project, first of all, the research goal is defined and set. After choosing a goal, tasks are developed to achieve this goal. The next stage of working on the project is to decide how to achieve the set goal, and each project should cover the student's scientific research. Otherwise, the practical part of the project will be disconnected from the theoretical part.

The first feature of the design is focused on information retrieval. The collected data is processed and linked with the thoughts and opinions of the student who is working on the project. At this stage of work, children not only master the material contained in the project, but also develop many personal qualities. Such qualities should include independent work skills, independent thinking, reflection, creative research, creativity, and self-development and self-evaluation skills.

The effective aspects of teaching biology lessons based on project methods allow solving the problems of education, upbringing and development. It is more appropriate to use the design method in biology lessons and introduce it to the educational process in higher classes. In particular, taking into account the learning indicators of students of the 9th, 10th and 11th grades, developing their independent work skills and ultimately teaching them to research is the basis for the effective use of this method.

Today, attention is being paid to the formation and development of students' research concepts from the elementary school age. That is, the use of the phrase "I am a researcher" from the first pages of the "Natural Sciences" textbook in primary grades confirms our words. If we pay attention to this textbook prepared for elementary grades, 70-80% of the topics are organized with practical exercises, the interesting thing is that project work is recommended from the 1st grade. We can learn from this that it is reasonable to admit that the expressions of project, designing or using the project method are not new for today's schoolchildren, including students during the study of biology.

At different stages of working on the project, children develop different skills and abilities. Thus, the ability to find problems in different areas of knowledge lies in the goal setting stage. Discussion of options and methods of solving the problem allows to develop the ability to search for possible ways to solve the selected problem and to identify research objects. In the process of searching for information and distributing responsibility, the skills of finding, systematizing and summarizing information, and analyzing data are formed. Completing the work and

analyzing the obtained results allows to draw reasonable conclusions, process experimental work data, and develop the ability to solve cognitive and creative problems. The presentation (defense) of the project allows students to develop the ability to freely and reasonably express their thoughts and acquire speech culture.

Project activities also require a lot of effort and knowledge from the teacher to motivate students to learn science. In the process of work, the teacher must act in different roles: a consultant (a teacher is an organizer of children's free time and a guide to information materials), a generalist (able to advise a child with various information), time manager, enthusiast (increases the motivation of students, supports them, encourages and directs them towards achieving the goal), "person who asks questions", expert (exactly analyzes the results of the completed project).

The complexity of the project topic also has a strong impact on students' work, making the topic too "difficult" can scare children away from learning altogether. You should not forget about the nature of the relationship between the children in the group, especially when organizing a project in a group of students. In any case, detractors resist approval of the project. To avoid this, it is better to organize groups according to the interests of students. Although, in my practice, students who were aggressive towards each other in joint project work, during the project, were in a state of search, and there were cases of reconciliation and friendship with each other. Also, working together on a project leads to the development of important social skills such as communication and cooperation.

I don't think the project "fits" into a 45 minute lesson. This work requires more effort from the teacher and students. Therefore, work on project research should be done outside of class, and sometimes students' home time is spent. Sometimes students reach the final stage of their studies after completing 5 or more lessons. However, the most in-depth and meaningful projects are done individually, such as in an elective course or extracurricular activities. Ideally, the project should bring together people who are interested in the topic, and it would be great if it was a group of teachers and students of mixed ages.

Not only the person responsible for the project, but also all members of the project team actively participate in filling the project folder.

REFERENCES

1. Богомолова А. А. Организация проектной исследовательской деятелности учащихся./ А. А. Богомолова // Биология в школе. – 2006. - № 5.
2. Кузнецова В. И., Чурилова А. М. Блочно – модулная технология. Один урок из темы «Земноводные»./ В. И. Кузнецова, А. М. Чурилова// Биология в школе. – 1998. -№ 5.
3. Русских Г. А. Технология проектного обучения [текст]./ Г. А. Русских// Биология в школе. – 2003. - № 3.
4. Щербакова С. Г. Organizatsia проектной деятелности в образовательном учреждении./ Сост. С. Г. Щербакова. – Волгоград: ИТД Корифей, 2006.
5. Djurayev R.Kh., Karakhonova L. M. Media education as a factor of increasing the quality of teaching schoolchildren //Образование через всю жизн: непрерывное образование в интересах устойчивого развития. – 2013. – Т. 11. – №. 2 (eng). – С. 287-288.

6. Джураев Р. Х., Карахонова Л. М. Педагогическое сопровождение одаренных детей образовательными учреждениями //Integration of science, education and practice. Scientific-methodical journal. – 2022. – Т. 3. – №. 4. – С. 66-70.
7. L.M. Karakhonova. Issues of developing research competence in students based on the Project method // Novateur Publications JournalNX- A Multidisciplinary Peer Reviewed Journal ISSN No: 2581 - 4230 VOLUME 9, ISSUE 9, Sep. -2023. –P. 10-15
8. L.M. Karakhonova. Use of modern technologies used to implement 3-d modeling From biology as a factor for development of students' research Competences// International scientific and technical conference "Digital technologies: problems and solutions of practical Implementation in the industry" APRIL 27-28, 2023. –P.1109-1111.
9. L.M. Karakhonova. Independent educational activity and mechanisms of effective organization in the continuous education process// American Journal Of Applied Science And Technology// VOLUME 03 ISSUE 06 Pages: 15-21. SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705) (2023: 7.063) - P. 15-21.