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Yessengalieva Tolkyn*, Kubesova Gulnar

Aktobe Regional University named after K.Zhubanov, Aktobe, Kazakhstan

***Correspondent-author: mr.beybarys@bk.ru**

E-mail: mr.beybarys@bk.ru, gulnar_kubesova@mail.ru

GEOECOLOGICAL EDUCATION IN SECONDARY SCHOOL FEATURES OF THE DEVELOPMENT OF ENLIGHTENMENT

Annotation. This article is devoted to the consideration of the problems of the development of geoeological and geographical education in high school. The problems of modern school education are touched upon. The growth of negative anthropogenic impact on the environment requires the presence of basic geoeological knowledge in each person. It is important to be able to make environmental forecasts, to have the skills to live rationally. The correct organization and planning of the phased acquisition of knowledge gives a complete idea of the diversity of Natural Resources, nature protection, rational use, their reproduction. The article is aimed at the formation of students' knowledge, skills and abilities in ecology, geography, geoeology, geoeconomics. The knowledge gained is necessary to solve geoeological, geoeconomic, social, geopolitical and global problems of society. Extracurricular activities, research activities contribute to geoeological and geographical education in high school, the development of geographical, environmental culture and the education of the younger generation.

Keywords: Environmental Education; Society; Natural Resources; nature management; geoeology; geoeconomics; environmental education; geographical education.

Introduction

Currently, humanity is experiencing an era of maximum aggravation of relations with the environment, an increase in the number and scale of manifestations of adverse natural and man-made phenomena. Therefore, every inhabitant of the planet must have basic knowledge of sustainable life and the ability to predict impending threats from the environment. The transfer of such knowledge, the development of business and skills is expected within the framework of Environmental, Geographical education, upbringing, and educational work.

Environmental education of the younger generation has become an urgent need of society today. The causes and consequences of adverse environmental conditions, the possibility and need to overcome the environmental crisis - these issues are an obligatory component of environmental education at school. The environmental problems of our time require school to pay more attention to the formation of environmental consciousness, understanding the world around us and oneself. The current environmental situation of the environment requires a radical change and revision of the content and organization of environmental education and upbringing of student youth, environmental, naturalistic, experimental and research activities [1, p. 374-376; 2].

Based on the foregoing, the relevance of the study of environmental education at school, as well as the exchange of experience in this area, is relevant and of practical importance.

It should be noted that the problems of the formation of ecological culture in the education system, the problems of interaction between man and nature were dealt with by many researchers, including I.D.Zverev, I.T.Suravegina, L.P.Nazarova [3, pp. 144-150], E.N.Dzyatkovskaya [4, pp. 6-10] and others.



The purpose of the study is the causes and consequences of negative environmental conditions in general, the possibility and need to overcome the environmental crisis – these issues are a mandatory component of environmental education at school. The environmental problems of our time require school to pay more attention to the formation of environmental consciousness, understanding the world around us and oneself.

Materials and methods of research

The study is based on the work of practitioners in the field of geoeological education of children of secondary school age, as well as methodological and legal documents in this area and the results of the authors' activities in the field of Environmental Protection in recent years. Training, education and education of children of preschool, primary and secondary school age, as well as interaction with secondary education institutions and organizations of additional education and volunteer orientation.

Research results and discussion

The basic school is one of the most important stages in the formation of the ecological culture and worldview of the individual. Of the variable component of the topics of elective courses "patriotism and global competence", the training of the course "Environmental culture" in the 6th grade can be integrated with the educational goals of the discipline "memory". According to the curriculum, there are opportunities to integrate the educational goals of the sections "Ecology and sustainable development", "ecosystems", "environmental culture" with the goals of the variable course "ecological culture". The individual results of mastering the program for the transfer of basic general education, among other things, there is a need to reflect the formation of the foundations of ecological culture corresponding to the current level of environmental thinking, the development of experience in reflective-evaluative and practical activities aimed at the environment. In life situations, and the meta-subject results of mastering the program are formed and developed environmental thinking and the ability to apply it in cognitive, communicative, social practice and professional orientation [5].

The applied significance of geoeology ends with its solution to the problems of interaction between nature and society. Global problems of interaction between nature and society require international cooperation. Assessment of the state of the geographical shell is carried out by analyzing monitoring data. The constructive role of geoeology is reflected in the multidisciplinary nature of research (Table 1).

Table 1 - Geosystem and Environmental Research. Link: prepared by the authors

Study of the territory in relation to economic use	Assessment of the geoeological state of territories	Assessment of the recreational potential of territories
Geoeological planning (design)	Geoeological zoning	Geoeological forecasts

The study of the territory in relation to the economic use is associated with the use of Natural Resources. These forecasts are based on a qualitative and quantitative assessment of the natural resource potential of the territory, as well as taking into account the stages, types, ways and bases of development, options for the future socio - economic development of the developed territory.

Research related to the assessment of recreational potential will be aimed at substantiating the placement and development of Tourism and recreation areas. In forecasting the development of identified objects, it is necessary to take into account the dynamics of anthropogenic changes in the



natural environment, the recreational capacity of the territory, accessibility and convenience of recreation.

Geocological forecasts rely on the formation of individual sectors of the economy and natural complexes, the location of the population, and the results of planning. The mentioned forecast can be divided into several stages (Table 2).

Table 2 - Stages of geocological forecasting. Link: prepared by the authors

1	Analysis of the natural and resource state of the region
2	Determination of the natural environment potential of the region
3	Determining the industrial situation of the region
4	The state of structural change, investment growth, economic development of the region
5	Identification of shortcomings in the location of individual enterprises and ways to solve them

An important role in the formation of environmental consciousness is played by the involvement of students in the environmental protection activities of school forestry, horticulture, work in hunting farms, etc., in the work of sanitary Environmental Protection detachments that determine the degree of pollution of air, water, recreation areas; detachments that fight poachers (act in forestry); ambulance groups for animals and birds in winter; corners of nature

Tourist and local history work with children, aimed at the formation of the skills of correct behavior in places of recreation, forests, etc., is associated with the protection of nature.

The general education school is designed to educate students in the spirit of love for their native nature, Environmental Protection. In schools, students' environmental education is carried out in different areas:

- in classes;
- during excursions;
- in the process of socially useful labor.

Nature conservation self-education is very important-it is a means of deepening students' knowledge, their creative abilities, experience, the formation of skills and abilities to independently solve various problems of Nature Conservation. Independently processed information that students are deeply interested in is well perceived and understood.

Conservation work should be carried out continuously at all levels of the organization of the educational process in all disciplines and should be based on the principles of communication of theory with practice, Science, Interdisciplinary, individual approach. In addition, it should affect the formation of a holistic orientation of all students.

However, not all students fully understand the value and universality of environmental issues, their socio-economic, political, moral and ethical, aesthetic, legal aspects. As a rule, nature conservation issues are considered by students separately from complex natural phenomena. Students incorrectly present the norms of the attitude of people to the natural environment, the contradictions that arise in the system: technique-Society-nature.

All this requires increased attention and thoughtful work on environmental protection issues among students.

Starting from the primary grades, the main efforts of teachers are aimed at choosing tasks that contribute to the formation of students' positive attitudes, observation skills, orientation to positive and negative phenomena in the environment, emotional and aesthetic perception and assessment of nature, high civic responsibility for its state.

The most effective form of organizing students' environmental activities is excursions, during which the program and educational goals and objectives of environmental education and the mandatory component of environmental protection activities are solved.



In a comprehensive school, environmental educational work with the class is carried out not only by teachers, but also by the class teacher. In most cases, he acts as a mediator in the formation of the environmental competence of society and the child through the organization of various forms of educational activity of the class team, is the organizer of the communication system, creates conditions for the individual self-expression of each child and the development of his personality. In education, class teachers rely on the educational power of family traditions, use the opportunity to create educational conditions", have a long-term educational impact on the child. One of the functions of the class teacher is to work with parents. In the study of which of the middle school students, the ability to geoeological orientation to any activity, design and show different thinking is formed, respectively; to establish an active, clean, healthy and safe lifestyle, to understand the value of the quality of the environment as a modern culture, natural basis of life safety.

Thus, the modern educational standard reflects a systematic approach to the problem of environmental education, upbringing and education of middle-level students, includes a number of general indicators to the possibilities and approaches to the implementation of activities in the discussed aspect.

Environmental education at school is characterized by a theoretical and practical aspect that is inseparable from each other. The existence of life is based on the laws of nature, the study of which is aimed at providing theoretical knowledge. The development of the worldview is formed with the help of experimental activities, observations and personal experience of interaction with objects of the surrounding nature. Section III of the school textbook, grades 10-11, is called "Prirodopolzovanie and geoeology". This section examines the ecological features of geographical systems at a high hierarchical level (physical and geographical zone, province, landscape) in order to preserve a geoeologically clean environment and ensure the normal use of Natural Resources. One can consider the reasons why geoeology as a separate scientific direction began to take shape in the 1930s - 1940s on the basis of the description of the surroundings of people, living within a certain geosystem.

Only acquaintance with literature, watching TV programs cannot fully form a person's experience-oriented attitude. The worldview is formed in the consciousness of the individual after applying the acquired knowledge in practice and mastering the value system and skills.

In the process of environmental education, the competence of students in organizing environmental activities is formed [6, p. 3-12].

The effectiveness of nature conservation education is primarily due to the provision of a well-thought-out targeted comprehensive system in its implementation, wide familiarization of students with all the main aspects of Nature Conservation: natural-scientific, ideological, environmental, legal, health-hygienic, moral-ethical and scientific-cognitive aspects.

The basic principles of Environmental Protection are the provisions developed on the basis of Article 31 of the Constitution of the Republic of Kazakhstan.

In 1996, the concept of security of the Republic of Kazakhstan was adopted for the first time. Later, this document was amended several times in the Republic of Kazakhstan in 2007-2024. It is the basis for the concept of transition to sustainable development.

Based on the principle of a systematic approach to the organization of Environmental Education, adopted on July 15, 1997 and amended by Law No. 8 on September 9, 2004, the main attention is paid to the following issues: the place of environmental education of students in the general system of school work; the level of environmental awareness of students; educational opportunities of subjects of environmental orientation; the use of mass, group, individual forms of work; ways to involve students in various types of environmental; Organization of joint work of the school, family, public and environmental organizations of the city on environmental education of students.

By order of the Republic of Kazakhstan dated July 7, 2006 No. 175 "conservation of the nature of Specially Protected Natural Areas is the main goal of the adoption of this law.



Today, ecology is considered not as a separate discipline, but as a complex interdisciplinary field of knowledge based on the synthesis of approaches to the correct formation of an ecological worldview:

- * natural science - teaching through the subjects of the school curriculum (geography, physics, biology, chemistry, fundamentals of life safety), within the framework of which blocks of knowledge are opened, skills are formed, skills are formed on various environmental issues;
- * ethnic and school environmental education should include the peculiarities of the national traditions of each geographical region of the Republic of Kazakhstan;
- * aimed at striving for a deep understanding of nature, and not just the necessary knowledge;
- * the main form of implementation of environmental education at school is a school lesson.

However, the limited time frame of the lesson and the presence of a fairly strict program do not allow the teacher to fully transfer the necessary knowledge and, moreover, practical skills of an environmental orientation. Environmental education at school is based mainly on the motivation of a small number of teachers, who in most cases carry out their activities in extracurricular activities [7, p. 98-107].

In recent years, in connection with the strengthening of the role of career guidance in educational institutions at all levels of training, one of the solutions may be to invite external experts and specialists, invited guests during extracurricular activities.

In the case of local favorable physical and geographical, for example, weather, classes are held outside the classroom: the theoretical material is summarized (for example, about the flora, fauna or waste of the region), then the practical part is performed (the grass cover around the school is studied, the herbarium is collected, the plants are photographed, observations on birds or, accordingly, cleaning, gardening) [8, p. 115-116; 9, p. 12-17].

Also, the purpose of the practical work of textbooks of grades 10-11 on the topic of proposing ways to solve the environmental problems of Kazakhstan is to analyze the impact on the environment in the selected industrial sector; prepare analytical reports on environmental problems in certain regions of Kazakhstan based on complex geographical, geoecological, statistical data.

The role of information technology due to the large amount of time spent on a personal computer, it is worth considering the available online features and methods of gaming and competition.

Several environmental weeks were held at the school. Interactive events on environmental education and upbringing are needed here: quizzes, creative contests, Olympiads, analogues of erudite TV programs, performances on environmental topics. In the presence of favorable weather conditions, classes are held outside the walls of the classroom: theoretical material is briefly presented (for example, about the flora and fauna). City or waste, then the practical part is carried out (the grassy cover around the school is examined, the herbarium is collected, the plants are photographed, the birds are observed or the cleaning of the area (landscaping is carried out accordingly) [10]. Also, the implementation of the practical component can be postponed when the task is assigned for a certain period, and the results will be released later for the entire class.

When strengthening the role of Information Technology and students spending more time on personal computers, it is worth considering the opportunities available online and the methods of gaming and competition.

For the expansion of environmental horizons, as well as the success of nature conservation activities, it may be recommended to conduct research work with students, thanks to which students master the methods of knowing nature and accumulate their own experience.

Conclusion

The relevance of environmental education and education is determined by the global environmental challenges facing all mankind and Kazakhstan. Environmental education of each person should include not only theoretical knowledge, but also practical skills with detailed methodological instructions.



It is one of the main blocks of the environmental education system for high school students. implementation by inviting external experts and specialists both in methods and facilities, extracurricular activities, conducting weeks and days of environmental camps, conducting games and competitions, conducting research and projects.

In textbooks of grades 10-11, along with the main text, it is considered in the annexes. They are designed for self – study and significantly complement the main educational material. The textbook contains a system of practical work and creative tasks that help consolidate the acquired theoretical knowledge.

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Есенғалиева Т.У., Кубесова Г.Т.

ОСОБЕННОСТИ РАЗВИТИЯ ГЕОЭКОЛОГИЧЕСКОГО ОБРАЗОВАНИЯ И ПРОСВЕЩЕНИЯ В СРЕДНЕЙ ШКОЛЕ

Аннотация. Данная статья посвящена рассмотрению проблем развития геоэкологического и географического образования в средней школе. Затрагиваются вопросы



просвещения современной школы. Рост отрицательного антропогенного воздействия на окружающую среду требует наличия у каждого человека основных геоэкологических знаний. Важно уметь строить экологические прогнозы, иметь навыки рациональной жизнедеятельности. Правильная организация и планирование поэтапного приобретения знаний дают полное представление о разнообразии природных ресурсов, охране, рациональном природопользовании, их воспроизводстве. Статья направлена на формирование у учащихся знаний, умений и навыков по экологии, географии, геоэкологии, геоэкономике. Полученные знания необходимы для решения геоэкологических, геоэкономических, социальных, геополитических и глобальных проблем общества. Внеурочную деятельность, проведение исследовательской работы, способствуют геоэкологическому и географическому образованию в средней школе, развитию географической, экологической культуры и воспитания подрастающего поколения.

Ключевые слова: экологическое образование; общество; природные ресурсы; природопользование; геоэкология; геоэкономика; экологическое воспитание; географическое образование.

Есенгалиева Т.У., Кубесова Г.Т.

ОРТА МЕКТЕПТЕГІ ГЕОЭКОЛОГИЯЛЫҚ БІЛІМ БЕРУ МЕН АҒАРТУДЫҢ ДАМУ ЕРЕКШЕЛІКТЕРІ

Андатпа. Бұл мақала орта мектепте геоэкологиялық және географиялық білім беруді дамыту мәселелерін қарастыруға арналған. Қазіргі мектепті ағарту мәселелері қозғалады. Қоршаған ортаға теріс антропогендік әсердің өсуі әр адамда негізгі геоэкологиялық білімнің болуын талап етеді. Экологиялық болжамдар жасай білу, ұтымды өмір сүру дағдылары болуы маңызды. Білімді кезең-кезеңімен алуды дұрыс ұйымдастыру және жоспарлау табиғи ресурстардың алуан түрлілігі, табиғатты қорғау, ұтымды пайдалану, олардың көбеюі туралы толық түсінік береді. Мақала оқушылардың экология, география, геоэкология, геоэкономика бойынша білімдерін, біліктері мен дағдыларын қалыптастыруға бағытталған. Алынған білім қоғамның геоэкологиялық, геоэкономикалық, әлеуметтік, геосаяси және жаһандық проблемаларын шешу үшін қажет. Сыныптан тыс жұмыстар, зерттеу жұмыстарын жүргізу орта мектепте геоэкологиялық және географиялық білім беруге, географиялық, экологиялық мәдениетті дамытуға және өскелең ұрпақты тәрбиелеуге ықпал етеді.

Кілт сөздер: экологиялық білім; қоғам; табиғат ресурстары; табиғатты пайдалану; геоэкология; геоэкономика; экологиялық тәрбие; географиялық білім.