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FORMATION OF ECOLOGICAL THINKING AMONG HIGH SCHOOL PUPILS

Annotation. *All over the world, environmental education is currently considered as the most important measure to prevent an environmental catastrophe and is a generally recognized priority area of pedagogical research. The main goal of environmental education is the formation of ecological thinking based on an active life position.*

Keywords: *environment, ecology, thinking, formation, knowledge*

Анотація. *У всьому світі екологічна освіта розглядається як найважливіший захід запобігання екологічній катастрофі та є загальновизнаним пріоритетним напрямом педагогічних досліджень. Головною метою екологічного виховання є формування екологічного мислення на основі активної життєвої позиції.*

Ключові слова: *довкілля, екологія, мислення, формування, знання*

Introduction. The founder of peace and National Unity, the Leader of the Nation, the President of the Republic of Tajikistan, dear Emomali Rahmon, in his message to the Majlisi Oli, noted: «It is necessary for education leaders and workers in response to the care and support of the state and the efforts of the patriotic mood of

the people to raise the level and improve the quality of education at all levels of education. Also, to strengthen control over the development of modern knowledge by students, to encourage teenagers and young people to read fiction and scientific books, to strengthen their creative abilities. In this regard, in order to further improve the establishment of the study of natural, exact and mathematical sciences, as well as the development of technical thinking of the younger generation, we propose to declare the years 2020-2040: «The twentieth Anniversary of the study and development of natural, exact and mathematical sciences» [1].

In connection with the above, secondary schools and universities face the most important task, such as the formation of a broad worldview among students, including moral, aesthetic, scientific and legal education.

Because the chemistry of the XXI century is the basis of the development of world civilization, without which it is impossible to imagine today's human life, his culture, worldview and lifestyle. Everywhere we will see the miraculous power of chemistry and chemical technologies [2].

The aim of the article is to reveal the formation of ecological thinking among high school students pupils.

Research results. During the lesson, it is important to form a culture of behavior and attitude to nature and the surrounding world among schoolchildren during their stay in the forest and on the shore of reservoirs, which has a positive effect on human health.

Despite the different approaches to solving the issue of the content of the concept of «ecological thinking», all teachers assume that the basis of ecological thinking is the responsibility of a person for the consequences of his interaction with nature. The goal of ecological thinking is the formation of a responsible attitude to the environment, which is based on new thinking.

The term «ecological thinking» came into practical use in the 80s of the XX century. This was due to the formation of an ecological information space in Soviet society since the beginning of the 80s of the last century, as well as the activation of the ecological aspect of social existence.

E.A. Turdikulov notes that the leading researchers of the problem of the formation of ecological thinking (N.M. Mammadov, I.T. Suravegina, S.N. Glazachev, I.D. Zverev) have repeatedly noted that the highest result of the process of formation of this type of thinking is the formation of an ecological worldview in every person, starting from school age, giving him opportunities to apply knowledge and skills in the field of ecology in practice. To do this, it is necessary to form ecological thinking among schoolchildren [3].

The idea of forming ecological thinking as the goal of ecological education of schoolchildren was expressed by E.A. Turdikulov (1982), S.S. Khromov (1984), etc. E.A. Turdikulov was one of the first in his dissertation research to propose the task of «developing ecological thinking» along with the task of forming ecological knowledge [3, p. 12]

The role of chemical knowledge is very important in the development of ecological culture of schoolchildren, in which environmental problems are mainly chemical in nature, and chemical methods are used to solve many of them. Chemistry as a subject should teach students chemical and environmental knowledge, which are necessary for everyday life, industrial activity, education, the right direction of behavior in the environment. One of the main methods of formation of ecological culture in teaching chemistry is the solution of chemical and environmental problems and its application in the educational process [4].

Introduction to the study of chemistry lessons-research with an environmental focus – a step-by-step process.

The first stage for the implementation of research work is to work with additional literature. First of all, the student must be taught to analyze, comprehend the material, show mental activity in its assimilation.

The second stage is the writing of reports, abstracts. This work forms the ability to behave in front of the public, the guys learn how to think independently, select additional literature on the topic, find the necessary information in it.

The third stage is practical work. They allow the children to play the role of an experimenter themselves and teach them to conduct elementary scientific research.

And the last stage is the lessons–studies with an environmental focus, which are included in the work program, as well as in extracurricular activities.

In the process of studying chemistry in grades 9-11, such research lessons as, for example, «Soil Biochemistry» are developed and conducted: during the work, students not only get acquainted with the chemical composition of soils, but also draw conclusions about the ratio of organisms (earthworms) and the quality of soils, the toxicity of elements, themselves give recommendations on environmental measures.

When studying the section «Chemistry in everyday life», lessons are held, during which students learn to put into practice their knowledge of chemistry to solve everyday problems: For example, determining the quality of food: canned meat, fruit juices, honey, chocolate.

When studying the course «Organic Chemistry», lessons are planned to show the harmful effects of organic substances on living organisms. For example, «Natural sources of hydrocarbons and their processing», during the study of this topic there is an acquaintance with oil and petroleum products. It is necessary to consider not only their positive role in human life, but also their negative impact as pollutants. Schoolchildren in the course of research work: «The influence of oil on living organisms» independently come to the conclusion about the harmful effect of oil and petroleum products on many living organisms.

Conclusions. As a result of this activity, the student receives additional fundamental knowledge on the studied topic, which complement the basic chemistry course. The student develops the skills of research work, the ability to select the necessary information using a variety of sources, present the material in printed and electronic form, competently defend their views on the problems posed.

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