

Use of Problems with Ecological Content in Mathematics Lessons in Primary Grades

Sultanmurad Saitganievich Imomberdiyev
Teacher of Chirchik State Pedagogical University

Abstract:

Abstract: In the article, the primary school education system and content are currently in the process of updating and updating. One of the tasks of education is the formation of ecological consciousness. It is not only love and respect for all living beings, but also a sense of personal responsibility for what is happening around.

Keywords: ecology, mathematics, environment, eco-mathematics, primary classes.

BOSHLANG'ICH SINFLARDA MATEMATIKA DARSLARIDA EKOLOGIK MAZMUNLI MASALALARDAN FOYDALANISH

Sultanmurad Saitg'aniyevich Imomberdiyev
Chirchiq davlat pedagogika universiteti o'qituvchisi

Annotatsiya:

Maqolada hozirgi kunda boshlang'ich maktab ta'lim tizimi va mazmunini yangilash, sifat samaradorligini oshirish hamda ta'limning zaruriy zamonaviy vazifalaridan - ekologik ongini shakllantirishga qaratilgan. Bu nafaqat barcha tirik mavjudotlarga bo'lgan muhabbat va hurmat, balki atrofda sodir bo'layotgan noxush jarayonlar uchun shaxsiy javobgarlik hissidir

Kalit suzlar: ekologiya, matematika, atrof muhit, eko-matematika, boshlang'ich sinflar.

Ecological education includes the organization of educational activities that include the formation of knowledge about the environment through nature, within nature, for nature [4]. These two words have many different meanings: plant ecology, animal ecology, forest ecology. This is from the last century. And now you will hear more new, less familiar things: video ecology, ecology of the soul... Greening education means forming a new worldview and a new approach to activity based on the formation of ecological values. . Ecological education is a direction of new values based on universal, natural values of existence: man, nature, creation. The ultimate goal of environmental education is to educate people and change their behavior [3].

The concept of "ecology" ceases to be only a branch of biology and becomes a defining concept of modern human culture. Today, thanks to the dedication and enthusiasm of teachers, the simple idea of environmental education as a collection of knowledge in biology, chemistry, economics and other sciences is being abandoned. There is an awareness that environmental education has a clear interdisciplinary nature, that it helps to understand our dependence on the



environment and to be able to take responsibility for it, that there is an experience of making rational decisions in the field of environmental education It's done. economy and politics[3]. In order to deeply understand the philosophical and methodological power of ecological education in solving problems in the field of ecology and pedagogy, a more thoughtful participation of pedagogues in ecological education is required. I see my contribution to solving environmental problems by making children interested in the world, around them and what is happening to them [4].

Mathematics is one of the subjects that is not yet sufficiently connected with ecology, and at the same time these subjects are closely related to each other. In the process of school education, students' ecological knowledge can be increased through mathematics lessons, using appropriate material. As a teacher, I can offer my students tasks based on information from nature literature. Solving these problems will familiarize students with environmental problems and prevent them from making mistakes related to the wrong attack on nature in the future. But we must not forget that the greening of mathematics allows us to observe the development process of human knowledge in time and space. Mathematics, like all other sciences, arose from the practical needs of people. Entire departments of mathematics were established to analyze natural phenomena and solve technical problems. As in ecology, in mathematics there are two main sources of scientific discoveries: practice and the need to systematize discovered facts, analyze them, systematize them, and clarify their interrelationships. Mathematics creates conditions for the development of the ability to quantitatively assess the state of natural objects and phenomena, the positive and negative consequences of human activity in the natural and social environment. It is good to apply environmental tasks in primary school. It is recommended to develop "ecological" moral values for children in these classes. The goal of raising children of this age is to form a positive attitude towards the environment. The topics of tasks can be very diverse: bioecological, geocological, sociological, historical, including solving problems of environmental management problems, etc. Text tasks allow you to open questions about the environment, its care, rational management of the environment, restoration and reproduction of its natural resources. Each mathematics course can contribute to the formation of environmental awareness [5].

I chose a series of environmental tasks for elementary school that do not focus on the conservation of natural resources. development of ecological culture, including love for nature, through the opportunity to see human health, the beauty of the surrounding world. Each assignment is followed by a brief review or discussion questions, during which students develop their understanding of the environment. Their solutions are elementary, but they are formulated as they appear in practice, i.e. missing or redundant information. Therefore, a significant part of the lesson is spent on explaining and analyzing the content of the assignments.

Tasks

1. According to scientists, a family of 3 people will need 1200 trees throughout their life. How many trees are used for a family of 5?
2. You can get 40 km of thread from 1 kg of flax. How many kilograms of linen are needed to make 280 km of thread?



3. In the old days, Russian farmers made shoes from linden bark. For one pair of shoes it was necessary to remove the bark from 3 trees. Each farmer wore 42 pairs of shoes a year. How many trees does a farmer need to bare every year to avoid going barefoot?
4. An infusion of aspen leaves is used in folk medicine. Drink 6 times a day, 1 tablespoon every 2 hours. If you start at 9 am, what time should you take the last spoonful of infusion?
5. There are 200 types of edible mushrooms in Russia, but at the moment, mushroom pickers actively collect and consume no more than 1/10 of them. How many edible mushrooms are almost never eaten?
6. The daily intake of vitamin C necessary for the body is contained in 120 grams of oranges or 30 grams of black currants. How much more vitamin C is black currant than orange?
7. Bees collect 60 kg from 1 hectare of buckwheat, and 3 times more honey from 1 hectare of land. How many kilograms more honey can be collected from 5 hectares of grain than from 5 hectares of buckwheat?
8. It takes 100 years to grow a pine tree capable of bearing seeds, and it takes 5 minutes to cut down such a pine tree. How many times faster can you destroy a tree than you can grow it?
9. 20 species of fish used to live in the Elbe River (Germany), now only eel, river flounder and flounder. How many fish species have disappeared due to river pollution [2].
10. It takes 400 years to form a layer of fertile soil 1 cm thick. How many years will it take for its thickness to reach 20 cm?
11. 20 kg of waste paper saves one tree. How many trees does 100 kg of waste paper save?
12. In our climate, a banana peel thrown on the ground decomposes in about 2 years. Discarded cigarette residue takes more than two years to decompose. A plastic bag takes eight years longer to decompose than cigarette residue. How many years does the bag take to decompose? How many years does a banana peel take to decompose? (12 years, 10 years).
13. 3000 liters of water passes through the plant's treatment facilities per day. How many days will it take to purify 27,000 liters of water? How many liters of water pass through the treatment plant per hour?
14. How many flowering plants will die if each student in your class chooses 5 of them? And if there are not five, but 10? What conclusions can be drawn from this?
15. The factory throws waste into the river. 100 liters of dirty water enters the river in one minute. How much polluted water enters the river per hour, per day?
16. In one hour, a night hunter - a bat - can eat 165 malaria mosquitoes. How many harmful insects it destroys in a month [1].

The use of ecological tasks is an indicator of the level of ecological consciousness, which depends on the attitude of people to each other and to the natural environment, i.e. the survival of mankind. Environmentalization of mathematics contributes to students' knowledge of the world and its environmental problems; stimulating students' educational activities and forming ideas about the role of mathematics in solving environmental problems.



REFERENCES:

1. Burmistrova E.N., Ekologik mazmun bilan bog‘liq muammolar // Boshlang‘ich maktab. – 2007 yil - №9
2. Имомбердиев, С. С. (2023). Экологическое воспитание на уроках математики в средней школе. Образование наука и инновационные идеи в мире, 18(3), 46-52.
3. Имомбердиев, С. С. (2022). Основные направления работы с одарёнными детьми в начальной школе. European Journal of Interdisciplinary Research and Development, 10, 226-229.
4. Имомбердиев, С. С. (2023). Математика дарсларида экологик компонентдан фойдаланишнинг ахамияти. Мугаллим, 1(3), 186-191.
5. Zaynullin M.N. / Matematik kompetentsiyani shakllantirish vositasi sifatida ekologik mazmunli vazifalar / MN Zaynullin, Savelyeva SS // Alma mater. - 2010. - No 3. - B.67.
6. Stepanova I.A., Kichik maktab o‘quvchilarining ekologik ta‘limiga ba‘zi yondashuvlar // Boshlang‘ich maktab. - 2007 - № 7
7. Tsvetkova I.V., Boshlang‘ich maktab uchun ekologiya / V.X. Yanaeva. - Yaroslavl: Rivojlanish akademiyasi. - 2008 yil
8. Ochilov Fariddun Izatulloevich. Features Of Teaching The Subject “Natural Sciences” To Primary School Students On The Basis Of The Competence-Based Approach. 2023. 4 Part 3. – P. 113-117.
9. Rahmatov DN, Akbarova LU. Sovremennye informacionno-kommunikacionnye tehnologii i ih rol’v sisteme obrazovaniya. Ekonomika i socium. 2018(11):54.
10. Burteshova, A. B. (2023). Agresiv hulq-atvorning gender farqlari. Перспективы развития, 1(1), 354-360.
11. Burteshova, A. B. (2023). O’smirlar agresivligi xususiyatlarining empirik ko’rsatkichlari. Образование и педагогика, 1(1), 176-186.
12. Burkhanovna, B. A., & Rajabboyevna, Q. O. (2022). Psychological research on the problem of gender characteristics of adolescent aggression. Galaxy International Interdisciplinary Research Journal, 10(10), 440-447.
13. Burkhanovna, B. A. (2022). Youth aggression and agency phenomenon in psychology. Galaxy International Interdisciplinary Research Journal, 10(5), 1102-1110.
14. Zoirov, U. (2021). Development of the low-cost solution for Braille display based on linear actuators with 3D printed mechanisms and servomotors (Doctoral dissertation, Politecnico di Torino).
15. Seitniyazov, K. M. (2023). Some traditional names in Toponymics. Galaxy International Interdisciplinary Research Journal, 11(4), 842-845.

