

EXPLAINING THE INTERCONNECTION BETWEEN LIVING AND NON-LIVING NATURE TO PRIMARY SCHOOL PUPILS IN NATURAL SCIENCE**M.U. Savriddinova**3rd year student Gulistan state pedagogical institute**e-mail: mexrinozulugbekovna1209@gmail.com Tel: +998944677644****<https://doi.org/10.5281/zenodo.19482215>**

Annotation. This article analyzes the content, methodological foundations, and pedagogical significance of forming the interconnection between living and non-living nature in the process of teaching natural science in primary grades. Forming fundamental ideas about nature in young students, understanding nature as an integral system, and perceiving the interaction of each of its components is an important factor in developing their ecological culture. The article extensively covers the practical and theoretical aspects of this process. The interaction between elements of living and non-living nature, the dependence of living organisms on the non-living environment, and the mechanisms of ecosystem functioning are explained in a simple and age-appropriate language. The importance of didactic methods such as observation, comparison, experiments, demonstrations, discussions, and nature trips in teaching these concepts is justified.

Keywords: living nature, inanimate nature, primary education, natural science, ecological culture, ecosystem, components of nature, observation method, experiment, demonstrativeness, cause-and-effect relationships, careful attitude towards nature, ecological education, nature conservation.

Аннотация. В данной статье анализируются содержание, методические основы и педагогическое значение формирования взаимосвязи между живой и неживой природой в процессе обучения естествознанию в начальных классах. Формирование у молодых учеников фундаментальных представлений о природе, осознание природы как целостной системы, восприятие взаимного влияния каждого её компонента является важным фактором в развитии их экологической культуры. В статье подробно рассматриваются практические и теоретические аспекты этого процесса. Взаимодействие элементов живой и неживой природы, зависимость жизни от неживой среды, механизмы функционирования экосистемы объясняются простым и доступным для детей языком, обосновывается значимость применения таких дидактических методов обучения, как наблюдение, сравнение, проведение экспериментов, наглядность, беседа, выходы на природу.

Ключевые слова: живая природа, неживая природа, начальное образование, естествознание, экологическая культура, экосистема, компоненты природы, метод наблюдения, эксперимент, наглядность, причинно-следственные связи, бережное отношение к природе, экологическое воспитание, охрана природы.

Annotatsiya. Ushbu maqolada boshlang'ich sinflarda tabiatshunoslik ta'limi jarayonida jonli va jonsiz tabiat o'rtasidagi o'zaro bog'liqlikni shakllantirishning mazmuni, metodik asoslari va pedagogik ahamiyati tahlil qilinadi. Yosh o'quvchilarda tabiat haqidagi fundamental tasavvurlarni shakllantirish, tabiatning yaxlit tizim ekanligini anglash, undagi har bir tarkibiy qismning o'zaro ta'sirini idrok etish ularning ekologik madaniyatini rivojlantirishda muhim omil bo'lib, maqolada aynan shu jarayonning amaliy va nazariy jihatlari keng yoritiladi. Jonli tabiat va jonsiz tabiat elementlarining o'zaro ta'siri, tiriklik hayotining jonsiz muhitga bog'liqligi, ekotizimning ishlash mexanizmlari sodda va yoshga mos tilda izohlanadi, ularni o'rgatishda

kuzatuv, solishtirish, tajriba o'tkazish, ko'rgazmalilik, suhbat, tabiatga chiqish kabi didaktik metodlarning ahamiyati asoslab beriladi.

Kalit so'zlar: *jonli tabiat, jonsiz tabiat, boshlang'ich ta'lim, tabiatshunoslik, ekologik madaniyat, ekotizim, tabiat komponentlari, kuzatuv metodi, tajriba, ko'rgazmalilik, sabab-oqibat aloqalari, tabiatga ehtiyotkor munosabat, ekologik tarbiya, tabiatni muhofaza qilish.*

Teaching Natural Science in Primary Grades is considered a fundamental stage in shaping a pupil's worldview, ecological thinking, attitude toward the environment, and ability to make conscious decisions in daily life. From the very initial stage of studying nature, it is essential to correctly form pupils' understanding of living and non-living nature, to help them perceive nature as an integrated, interconnected, and dynamic system, and to comprehend the significance of each natural factor for life. This prepares them for mastering more complex biological, ecological, and geographical knowledge in the future.

The necessity of teaching the interconnection between living and non-living nature from an early age lies in the fact that as children understand the interrelatedness of every natural process, their ecological responsibility, careful attitude toward nature, observational skills, and analytical abilities develop. Therefore, this direction is recognized as one of the urgent methodological tasks of primary education.

Today, the intensification of ecological problems, the serious agenda of rational use of natural resources, and the disruption of natural balance as global processes require educating the younger generation as individuals who consciously perceive nature, understand the importance of ecological balance, and demonstrate a caring attitude toward the environment. This begins with a deep understanding of the organic interconnection between non-living nature — air, water, soil, sunlight, temperature, wind — and living nature — plants, animals, and humans. The task of the primary school teacher is to explain in a simple, clear, and engaging way the fundamental scientific truth that “living nature depends on non-living nature and cannot exist without it,” and to guide pupils to observe natural processes, compare phenomena, and identify causes and consequences.

It should also be acknowledged that pupils' initial ideas about nature are often formed through everyday observations, surrounding events, and the ecological culture of family and society. School systematizes these ideas, provides scientific justification, and strengthens them through logical consistency and real observations. Studying living and non-living nature together helps pupils understand nature not as a set of isolated sections but as a single ecosystem in which every element performs its own function. For example, understanding that plant growth requires sunlight, water, soil, and air; that animal life depends on plants and environmental conditions; and that human activity can have positive or negative impacts on natural components are simple yet vital truths that serve as foundational points in shaping ecological worldview.

Moreover, effective teaching in primary grades requires the use of didactic games, nature excursions, observation journals, mini-experiments, visual aids, illustrations, models, and laboratory equipment. These methods actively engage pupils in the learning process and help them understand nature more quickly and deeply. Since children of this age tend to learn through practical activity, simple experiments demonstrating changes in non-living nature (such as water evaporation, melting ice, soil moisture, and the effect of air temperature) become highly understandable for them. As a result, they begin to comprehend that the condition of living nature directly depends on these factors.

The interconnection between living and non-living nature is one of the most important principles of natural science, demonstrating that non-living environmental factors play a decisive role in the survival, development, and reproduction of living organisms. The concepts of “living” and “non-living” cannot exist separately in nature, as the life of every organism fully depends on water, air, soil, light, heat, temperature, and wind. Plants obtain energy from sunlight through photosynthesis and, in turn, serve as a source of food for animals. Animals adapt to environmental conditions such as water, air, and temperature throughout their lives.

Humans influence both aspects of nature, modifying the non-living environment and making interventions that may lead to positive or negative consequences for living nature.

Therefore, teaching the interconnection between living and non-living nature strengthens pupils’ scientific understanding of nature and lays the foundation for comprehending the logical basis of life processes. Considering the age characteristics of primary school pupils, this interconnection must be explained through simple yet clear examples and real-life facts

The Influence of Non-Living Nature on Living Nature. Components of non-living nature — air, water, soil, sunlight, heat — are fundamental sources of life and must be studied as separate objects in primary natural science lessons. For instance, demonstrating through practical experiments that plants require water and light for growth stimulates pupils’ interest in natural laws and develops their observational skills. When pupils compare seeds grown with and without water, or observe differences in light and dark conditions, they directly see how non-living factors affect living organisms. Such experiments not only form the basis for scientific understanding but also develop the ability to comprehend cause-and-effect relationships.

Additionally, issues such as air composition, the importance of wind, soil fertility, and temperature changes should be explained in simple language with visual support.

The Influence of Living Nature on Non-Living Nature. One of the most interesting topics for primary pupils is the impact of living nature on non-living nature. By learning how animals loosen soil, plants purify air, trees provide shade, and birds disperse seeds, pupils understand the interconnectedness of nature. To form the concept of an ecosystem, simple examples are sufficient: without trees oxygen decreases; without plants animals lack food; without animals some plants cannot be pollinated. These examples are simple yet deeply meaningful for young learners.

Furthermore, understanding the impact of human activity on non-living nature (global warming, air pollution, water depletion) and on living nature (habitat loss, reduction of plant species) contributes to the formation of ecological responsibility.

One of the most important outcomes of teaching the interconnection between living and non-living nature in primary grades is the development of ecological culture and ecological responsibility in pupils. A child who understands nature more easily realizes the necessity of protecting it. Pupils comprehend the essence of important life rules — saving water, protecting trees, being kind to animals, disposing of waste properly, and preventing environmental pollution — precisely through understanding this interconnection. The teacher should explain nature’s capacity to “respond”: if air is polluted, plants suffer; if water decreases, animals perish; if soil is contaminated, humans become ill. As this logical chain becomes firmly established in pupils’ thinking, positive attitudes toward nature, care, and caution are formed.

Forming primary school pupils’ understanding of the interconnection between living and non-living nature is not only one of the main tasks of natural science education but also a decisive factor in developing ecological worldview, culture of thinking, and responsible attitude

toward nature. Teaching the mechanisms of ecosystem functioning through age-appropriate examples, observations, and practical activities develops not only knowledge but also practical skills and competencies. As pupils comprehend the role of non-living factors (water, air, soil, light, temperature) in the lives of living organisms, they understand that nature is a complex system in which every change directly or indirectly affects other processes. This shapes a conscious human attitude toward nature and develops the ability to foresee the consequences of careless or harmful actions.

Furthermore, teaching the interrelationship of living and non-living nature fosters respect, caution, and care toward the environment. When children understand that every element of nature has its place and that plants, animals, and humans depend on the non-living environment, responsible behavior aimed at protecting nature, maintaining ecological balance, and preventing environmental pollution is formed.

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