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TEACHING METHODOLOGY OF NATURAL SCIENCES IN PRIMARY GRADES

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Abstract: The introduction of this article discusses the year in which the natural sciences textbook was introduced in primary grades, its advantages, convenience, and how it helps students appreciate the beauty of the environment and preserve nature. The shortcomings of the textbooks are also mentioned, along with suggestions for addressing these deficiencies.

Keywords: Natural sciences, didactics, Tashkent University of Applied Sciences, advantages, convenience, The World Around Us, Natural Science, Geography, Biology, Physics, experiments and practice, observation and analysis.

Аннотация:Во введении к данной статье поясняется, с какого года в начальных классах вв еден учебник естествознания, преимущества, удобства преподавания естествознания в нача льных классах, показ учащимся красоты окружающей среды и сохранения природы. Включ ены недостатки книг и предложения по их устранению.

Ключевые слова: Естественные науки, дидактика, Ташкентский университет прикладных наук, преимущества, удобства, «Окружающий мир», «Естествознание», «География», «Био логия», «Физика», Эксперимент и практика, наблюдение и анализ.

The Natural Science (SCIENCE) curriculum was introduced step by step. The first phase was implemented in the 2021/2022 academic year for grades 1-2, followed by its gradual introduction in other grades.

Currently, Natural Science lessons are scheduled as follows: one hour per week for 1st grade, two hours for grades 2-4, and three hours for grades 5-6, totaling 13 hours per week.

One of the main advantages of the Natural Science course is the integration of multiple subjects. In other words, rather than overwhelming students with separate subjects, they are taught 5-6 different disciplines within a single course. For example, if we take the topic of wild and domestic animals' habitats, we see a direct link between nature and zoology, demonstrating the interconnection with biology. Similarly, in the 3rd-grade Natural Science textbook, the topic "Stars and Planets" introduces students to fundamental concepts of "Astronomy" from an early stage. Another convenience is the inclusion of exercise books alongside textbooks. This allows students to reinforce their knowledge through workbook exercises, helping them retain information better.

Identified Drawbacks While the textbook content is well-structured, engaging, and visually appealing, one drawback is the issuance of separate books for each quarter instead of a single comprehensive textbook for the entire academic year.

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This approach has several downsides:

- The cost of printing multiple books increases.
- Teachers must spend time collecting books at the end of each quarter.
- At the beginning of a new quarter, distributing new books takes additional time, which affects lesson quality.

Proposed Solution A more efficient approach would be to return to the previous system, where a single textbook covered all four quarters. This change should apply to all elementary-grade textbooks, ensuring both financial savings and time efficiency.

Teaching Methodology for Natural Sciences At the Tashkent University of Applied Sciences, the methodology of teaching Natural Sciences is introduced in the second semester of the second year for students specializing in Elementary Education. As part of their studies, students receive essential knowledge on various aspects of Natural Science teaching methodology.

These areas includes the following:

1. Learning through Experiments and Practice
2. Interactive Teaching Methods
3. Use of Visual Materials
4. Observation and Analysis
5. Cooperative Learning
6. Research Projects

1. Learning based on experiments and practice: In this method, students observe nature, studying weather conditions, birds, trees, animals, mountains, and plants in their natural environment. They conduct various experiments while utilizing theoretical knowledge and performing practical activities.

2. Interactive methods: This method is used to increase students' interest in lessons. For example, engaging games, projects, discussions, project-based activities, and quick question-answer sessions help boost students' participation and engagement in the learning process.

3. Use of visual materials: In teaching natural sciences, students are provided with various photos, videos, short films, graphics, and other visual materials to help them develop independent thinking skills.

4. Observation and analysis: Students observe their surroundings, analyze the knowledge they acquire, study different scientific methods, and conduct experiments to enhance their understanding.

5. Cooperative learning: This method encourages students to work together in groups, support each other, collaborate on experiments, and develop teamwork skills. It helps them take their first steps in organizing work within a community.

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6. Research activities: Students engage in small research projects related to natural sciences, conduct scientific experiments, and draw conclusions, which helps improve their scientific thinking.

Contribution of Great Scolars Additionally, students gain insights from the life experiences of great ancestors who documented their knowledge in works passed down to future generations. For example, the great scholar Abu Ali Ibn Sina (Avicenna) discussed human health, diseases, and bodily functions in a logical manner in his works, such as The Canon of Medicine (Kitab al-Qanun fit-tibb). In Kitab ash-Shifa, he also provided reflections on geological processes. Another renowned scholar, Abu Rayhan Beruni, in his work Kitab al-Tafhim, described the various phases of the moon. Similarly, Zahiriddin Muhammad Babur, in his book Baburnama, documented information about plants such as Bamboo, Grapes, Pomegranate, and Aromatic plants.

Conclusion: Before introducing students to new scientific advancements, it is essential to familiarize them with the timeless works of great scholars. Their knowledge serves as a foundation upon which students can build further understanding.

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