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PRINCIPLES OF SELECTING MATERIALS FOR THE FORMATION OF FIRST INVARIANT AND VARIABLE CONCEPTS ABOUT NATURE IN PRIMARY CLASS STUDENTS

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ABOUT ARTICLE

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Abstract: In the article, methodological-didactic bases, principles, laws, psychological-pedagogical possibilities of forming the first invariant and variable concepts of nature in elementary school students, previous ideas on the formation of the first invariant and variable concepts of nature in elementary school students, formation of the first invariant and variable concepts of nature in students information about the different levels is given.

INTRODUCTION

Through these concepts, we provide simple but understandable information to the students. Concepts are divided into certain categories. One of them is invariant and variant concepts. These concepts are used not only for Science classes, but also in other areas. The specific meaning of the concept depends on the field in which it is used. For example, in Linguistics "Invariant - an invariant is a structural unit (phoneme, morpheme, lexeme, etc.) that deviates from a concrete, variant implementation.

In mathematics, "Invariant is a property of a certain class (set) of mathematical objects that remains unchanged during certain types of transformations."[1-25-29]

In physics, invariance of a physical quantity means that it does not change with coordinate and time changes when physical conditions change or with respect to certain changes, for example, when moving from one inertial reference to another.

In economics, a price list invariant is a product that, among other products, participates in product exchange and whose quantity measures the prices and prices of all products. Therefore, the invariant itself is equal to the invariant (invariant) unit.

Invariant and variable didactic functions are studied separately in the process of continuous education. First of all, when we mean variant didactic functions, the word variant is derived from the Latin word "variant" which means variable.

In the process of continuous education, it is understood that in the formation of the first concepts of nature in students, it is necessary to achieve the diversification and change of the educational content without formal teaching.

Variants are different representations (modifications, implementations, demonstrations) of the same thing, Variants are the abstract introduction of the same object from its own modification, the general properties of the class of objects formed in variants and characteristic of each variant is a reflection. [2-72-74]

Invariant didactic functions are the opposite of variable didactic functions, and the word invariant is derived from the French word "invariant" which means unchanging.

Concepts with a characteristic that remain unchanged during a certain type of change are called invariant. Achieving the uniformity of the educational content in the formation of the first concepts of nature among students. Based on the content of education and the individual characteristics of students in these didactic functions, the research focuses on their similarities, contrasts, shortcomings and achievements.

In terms of educational content, the following levels of formation of the first invariant and variable concepts of nature can be seen in students during the continuous learning process:

- general secondary, secondary special and vocational, higher education;
- The invariance and variability of environmental education given in each subject based on the State Education Standards (DTS);
- the unity and diversity of the first invariant and variable concepts of nature;
- invariance and variability of the forms and styles of the first concepts of nature among students of continuous education institutions.

The following levels of formation of the first invariant and variable concepts of nature in students can be indicated:

- students' biological origin;
- diversity in the state of the natural environment's influence;
- invariance and variability of the conditions of continuing education institutions;
- diversity of students' interests.

When forming the first invariant and variable concepts of nature to primary school students, the following similarities and differences are determined based on the above-mentioned aspects:

Table 1

Similarity	Difference
- DTS;	- in each academic subject;
- in the curriculum;	- in the implementation of the curriculum;
- during the educational process;	-in educational stages;
- in FETB;	- in formation of invariant and variable concepts;
- in forms and styles;	- in the use of forms and styles;
- in formation of invariant and variable concepts;	- in different areas of biological origin;
- in the natural environment;	- in the non-uniformity of the state of sensitivity;
- in education;	- continuing education institutions;
- in continuing education institutions;	- in different conditions;
- in interest;	- in various interests;
- choosing a profession;	- in the various circumstances of the need to choose a profession;

-specialty;	- in the diversity of the quality of expertise.

Variable didactic functions in the formation of the first concepts of nature for primary school students are as follows:

- performing exercises in the first variant content related to nature, solving problems, using additional tasks in carrying out experiments and practical work;
- organization of lessons of the first variable content related to nature, using several different methods at the same time in the interdisciplinary communication;
- to conduct in class and extracurricular activities using various methods based on the first interest of elementary school students in nature;
- to achieve diversity of questions and answers, paying attention to the uniformity of topics when conducting tests with variable content;
- the development of students' knowledge, skills and abilities in the formation of the first variant concepts of nature, as well as the variety of assessment based on different methods.

Additional tasks, control questions and multiple methods are not used in performing invariant didactic functions. [3-53-54]

Therefore, the purpose of forming the first invariant and variable concepts of nature for students is to ensure the unity and continuity of general secondary, special secondary and vocational, higher education, to create the first invariant and variable concepts of nature, to create an educational environment using educational methods, theoretical knowledge of students, it is intended to ensure coherence with practical skills and qualifications.

Special importance should be attached to the use of various thinking methods such as analysis, synthesis, comparison, abstraction, concretization, generalization, etc., in the formation of natural science concepts.

From the topics given in the textbook, it is important to be able to distinguish them by thinking when forming concepts about plants, animals, animate and inanimate nature. For example: in the 1st-2nd grade textbook "The world around us" on the topic "Variety of plants", the teacher introduced the students to early flowering plants (tulips, violets, chuchmoma), and then divided the parts of these plants into parts (root, stem, leaf, flower). and teaches to determine the function of each part.

The effectiveness of the organization of science lessons is ensured by paying attention to the distribution of time, correctly setting the topic, goals and tasks of the lesson.

After the tasks of the lesson have been carefully thought out, the teacher uses different interactive methods and tools in the components of the lesson specific to the task: the organizational part, asking about the topic covered, explaining the new topic, strengthening the new topic, monitoring and evaluating knowledge, the end of the lesson, and giving homework. thinks about and prepares for the lesson. [4-29-32]

The information left in the minds of the students during the process of asking and explaining the teacher determines the percentage of the effectiveness of the lesson. When learning new knowledge in a new subject, the teacher and students focus on new concepts.

Students' knowledge will be strengthened if new concepts are filled with additional information by recalling the knowledge given earlier by the teacher and linking them to the previous knowledge. Separating the most important information helps to better absorb knowledge and prevents students from misunderstanding during homework.

Homework assigned by the teacher should not take up a lot of students' time. Special attention should be paid to interactive methods when conducting science classes. For this, interesting exercises, logic games, visual aids, handouts, various presentations are used.

An interesting passage of each lesson depends on the skill of the teacher. Passing the lesson in a meaningful way, taking into account the challenges ahead, should create will and interest in the students.

Another factor that ensures the effectiveness of the lesson is that the mastery of the content of the new educational material is in the center of attention of the teacher and the student. Spending time checking or repeating homework is a bad process. In the content of the educational material, attention is paid to the moments that students should pay attention to. In this place, the teacher will definitely rely on previously learned topics. We will connect this issue with the topic "Medicinal plants" (grade 3).

At this time, under the guidance of the teacher, the students will have a discussion about the healing properties of plants such as yantok, dalchoy, ituzum, deer grass, and rhubarb, and it will be explained that all of them are variants of "Medicinal plants". [5-25-29]

One of the important didactic requirements is to separate and emphasize the most important information in the content of the subject. At this time, the teacher should focus on saving the student's time and not creating difficulties.

In addition to didactic requirements, natural sciences, like other sciences, also have educational, psychological, and hygienic requirements.

Educational requirements. Science lessons have a great opportunity to take the first steps to educate young schoolchildren as mature people in all respects. It ensures harmony of intellectual, moral, labor, aesthetic, physical and environmental education of students. In particular, science lessons provide rich information for the formation of the first invariant and variant concepts of nature in elementary school students. In accordance with the principle that education has an educational character,

Special attention should be paid to inculcating ideas of a materialistic view of the world in young students. Accordingly, while preparing for the lesson, the teacher, relying on the curriculum and methodical exhibitions, should think carefully about what basic concepts, learning and skills will be formed in this lesson, what educational ideas will be instilled in their minds, and how to help satisfy the students' cognitive interests. [6-33-36]

The teacher's attention is focused on inculcating the idea that existence in the world is first of all real, they develop based on their own characteristics and laws, they are constantly changing and developing, in motion, and it is clarified in accordance with the content of each lesson topic. In the course of daily lessons, providing aesthetic education to junior schoolchildren is of particular importance. Nature enriches a person spiritually, increases his spiritual wealth.

Psychological requirements. The psychological characteristics of each teacher during the formation of the first invariant and variable concepts of nature in elementary school students:

must be able to recognize, remember, memorize, listen to thoughts, evaluate presence of attention, will and ability to set close goals, emotional activity.

Children's attitude to nature is also greatly influenced by their psychological state, such situations arise during trips, observations, practical work, live stories of the teacher. Accordingly, it is a necessary condition of the teacher's activity in the lesson to influence the personality of students, to make them happy with their work and to involve them in satisfactory educational activities. Taking into account the above, the psychological state of the teacher quickly affects the students. [7-29-30]

The mood of the teacher being attentive, organized, intelligent, on the contrary, the state of being rude, rude or indifferent is quickly given to children. Accordingly, following pedagogical rules and manners, during lessons or other activities, the teacher should act completely detached from family situations, surrounding reality unpleasantness, feel free and immersed in his profession, entering the image.

Hygienic requirements. One of the factors that ensure students' healthy, active, ability to acquire knowledge is the hygienic demand for the lesson, the creation of conditions that are organically connected with it. U factors:

- regulating a certain temperature in the classroom;
- lighting standard;
- prevent mental exhaustion;
- normal activity of sensory organs.
- compliance with personal hygiene issues when performing practical tasks.

The requirements and criteria for the formation of concepts are the systematization of knowledge. In science lessons, the information in each class is not repeated, but one is a continuation of the other. Information complements each other. The topics in the textbook are enriched with wider and deeper knowledge. One of the didactic requirements is to describe the topics in the textbook according to the age characteristics of the students.

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