

## DIDACTIC FOUNDATIONS OF THE INTEGRATION OF NATURAL SCIENCE KNOWLEDGE IN PRIMARY SCHOOL AS A MECHANISM OF SYSTEMATIC COGNITION OF THE SURROUNDING WORLD

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### ABSTRACT

In the article it is that in the perception and study of nature in primary school can and should develop scientific thinking with age and individual personality characteristics. This type of thinking, along with others, is developing in the study of a particular area of knowledge - nature and is defined as the unity of theoretical and empirical thinking as an integrated, creative, conceptual.

**Keywords:** Natural science, painting, world, thinking, perception, learning, nature.

### INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

In the modern world, many sciences can be studied through the Komplex review. At the same time, the most effective method of knowledge is associated with the assimilation of relations between objects. Problems of integration and methods of its implementation are still relevant in the theory and practice of primary education.

Revealing the peculiarities of integrated education in the primary classes, a number of concepts of personal oriented education in modern education (E Bondarevskaya, Yakimanskaya, V Serikov, N. I. Alekseev and others), each of which "combines the original" socio-pedagogical, object-didactic and psychological aspects." It makes sense to ask the question: Can any education be integrated? In my opinion, yes.

Content integration (in teaching) is the process of establishing links between components of the content within a particular educational system in order to form a holistic idea of the world in which the child's personality is developed and self - developmenttirishga.

There are three levels of integrating the content of instructional materials :

\* intrapredmetnaya-integration of concepts, knowledge, skills, etc. in particular educational sciences;

\* predcatelararo-facts, concepts, prints, etc. k;

\* transpredmetik-synthesis of the main and additional components educational content.

An example at the first level is the systematization of knowledge in a certain discipline-the transition from the subordinate in the process of opening a new law to their system, the identification of the image of the world. At this level, integration — intrapredmetal - - focuses on "squeezing" the material into larger blocks, resulting in changes in the structure of the discipline structure. In this sense, integrated content is more extensive than information and is aimed at shaping the ability to have broad categories in terms of information. In Primary School, content can have different structures, where individual knowledge or their elements are "connected"to each other by different images. Intrapredmetry integration is characterized by a spiral structure based on the principle of concentration. For such an organization, knowledge

of value can be made from private (detailed) to public or from general to private. The content is gradually enriched with new information, links and links. A distinctive feature of this form is that the pupils, without losing sight of the first problems, are immersed and deepen the circle of knowledge associated with them. Internal integration can be expressed by Vertical and horizontal integration.

Secondary synthesis-intermittent integration-manifests itself in the application of laws, theories, methods of one educational discipline in the study of another. Systematization of content carried out at this level leads to such cognitive results as the formation of a holistic image of the world in the minds of students, which in turn leads to the emergence of qualitatively new types of knowledge expressed in general scientific concepts, categories, approaches. Interpredmetal integration significantly enriches intrapredmetnuyu. Interaction in primary school can be defined in the composition of scientific knowledge (real, concretely).

True interaction, for example, is established in the process of acquaintance with many elements of symmetry in the structure of natural bodies.

So, in the lesson of mathematics, the topic "symmetry of bodies" is studied, in the lesson of the surrounding world, "autumn has come" photos, the herbarium of the leaves of trees (maple, ash, etc.) is shown and the following issues are discussed: "what is the beauty of the leaves?"

How important is symmetry? What is nosetretric? I'm sorry. This will help the students to see and understand that symmetry Fakt takes place not only in mathematics, but also in nature, in fine art, in the technology of production of tracking objects. For the formation of natural-scientific concepts, concertional interrelations are of particular importance. For example, in the lesson of the surrounding world, children get acquainted with the concept of "deciduous", "coniferous" trees.

In the lessons of Fine Art, this concept describes the branches of deciduous and coniferous trees, in the lessons of labor - when modeling appropriately, the concept is not only repeated, but also identified in an associative way.

Such use of interrelations can be called a horizontal subject.

The vertical topic in the lesson takes five minutes or more, its implementation is different: a different approach to the analysis of the work, a new figurative comparison and associations, a new exercise or creative task, a short "conversation" the content of the vertical topic, a small note, attention in the process of explanation, problematic communication, explanation.

Each vertical theme has a general meaning, a brief description of one or more epigraphs, an emotional and poetic image of the subject, its philosophical and aesthetic meaning. Epigraphs offer different themes, different directions of its opening. The content of the topic covers everything that is included in the concept of "culture". For example, the meaningful core: "you live in a beautiful and wonderful world where you must love, appreciate and protect." The main groups of topics, each of which has a certain aspect, for example: "Nature is our home".

The sequence of themes is determined by the calendar, season, holidays (folk, Orthodox, civil). Different moral and environmental themes are placed in each group. The content of the topics and the logic of the presentation are determined by the age characteristics of the students and their willingness to think, think, the ability to highlight the main idea. As a result, students get a certain holistic picture of the world from the point of view of maintaining a vertical theme.

The real way of carrying out integrations into the training is that, as a basis for integration, there are often these or other problems, their separation and transfer through local materials does not cause great difficulties for the teachers.

The integrated lesson describes the following features:

- availability of a basis for integration (problem, theory, object of study);
- integrated approach to the selection of educational content;
- selection of sufficient composition of the lesson shape.

For the development of integrated lessons in primary school, it often means the use of a pre-integrated-thematic approach; a meaningful, methodical and organizational unit of the educational process is not a lesson, but a subject (Department) of the educational discipline. In turn, it should be understood as an Practice developed under the subject of study in didactics and in a special technique of grouping instructional materials around its basic, leading Rules. In the content of the educational subject, the leading rules of each subject are, on the one hand, subject to the leading ideas of the course, and on the other hand, this reveals the leading ideas, i.e., the main ones. in the process of studying the subject, the leading ideas of the subject are determined.

One of the conditions for the integration of educational and extracurricular activities is the principle of combining several disciplines and extracurricular educational activities. Thus, integration arises in the process of education and training as a conversation of these subjects on this topic. The theme includes specific content, image, emotional state, moral and aesthetic meanings. It goes through several lessons a week as a keyword and allows topics to enter into a conversation, while the topic is defined through the content of each topic.

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