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Opportunities and Pedagogical Conditions for the Organization of Integrated Lessons in the Field of Mathematics and Science Education.

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Annotation: This article provides feedback on the possibilities and pedagogical conditions for the organization of integrated lessons in the field of mathematics and science education, the concept of integrated lessons, the features of its implementation.

Keywords: Primary education, science, mathematics, pedagogy, integration, lesson, problem, idea, algebra, geometry.

Primary education, which is recognized as the main link of continuing education, organized in accordance with the requirements of the "On Education" and the "National Training Program", today acquires a new essence and content.

Primary education has moved to an integrated educational process based on interdisciplinary, interdisciplinary, interdisciplinary and interdisciplinary subjects. Primary education is based on four subjects: mother tongue, mathematics, nature, and education. suitable. The content of primary education is determined by the state educational standards of primary education, the minimum knowledge, skills and abilities that a child must acquire in these subjects.

Primary education is not only a social order that educates the student within these standards, but also the formation and development of personal qualities and qualities in the child, the involvement of play activities in conscious educational activities, the application of knowledge, skills and abilities acquired in education It also involves the formation of skills to be able to react consciously to the events taking place in the environment.

The concept of primary education, created on the basis of the requirements of the normative documents on the reform of primary education, reflects the current nature of primary education.

Like all fields of education, there is an opportunity to integrate the field of mathematics and the field of natural sciences. It combines major ideas, factors, conclusions into one subject. For example, the integration of mathematics belongs to its algebraic, geometric, arithmetic material. evidence and theoretical conclusions.The role of the link that integrates in primary education is performed by the teacher himself.He teaches children arithmetic, writing, nature many basic concepts and much more. It does this at the level of its own strengths and capabilities.The teaching of one teacher in the primary grades can also be considered as a way of integration.

While the methods of implementing integration can be good or bad, the essence of the problem is to turn away from one of the methods and from the other to organize an integrated education that takes into account the age characteristics of students at all levels.

In primary school, it is expedient to build integration by combining subjects that are relatively close to each other. The need to develop reading, writing and numeracy skills, an understanding of nature, which is very important. This seems to require teaching divided into disciplines. In this case, reading as a science includes not only artistic texts, but also materials on natural sciences, and mathematics includes arithmetic, algebraic and geometric materials.

Such integration does not hinder the formation of important skills, but rather guarantees

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their formation.

Today, the problem of creating an integrated course based on knowledge of naturalists remains relevant.

The purpose of integrated lessons is to broaden the relationship between things and events in the world in which he works, mutual aid, material and cultural diversity, and most importantly, about the inner (spiritual) and (social) world of man, the laws that govern the universe (natural, scientific, historical, moral). The main emphasis is not only on the acquisition of certain knowledge, but also on the development of figurative thinking. The general view of the world is introduced through sounds, images, colors, and the child puts the world in the role of self-explorer. in parallel with the course serves to study both the basic sciences and to create favorable conditions in primary education.

The content of primary education is aimed at the comprehensive mental development of students, the development of different thinking in them. The study of each subject allows the child to create mental attention, which activates the child's comprehension process, memory, sensitivity, thinking, speech and imagination. It is especially important to develop types of thinking that are inextricably linked to each other in the mathematical process.

Educational-based thinking serves the task of summarizing and gathering initial information in a live observation for conclusions. It teaches children to read, record, and collect real events and happenings. An abstract isolated event allows them to identify their meaning in events.

Primary education creates a knowledge base that allows children to master the science they want in the future. The subject has a solid foundation of science, leads to the understanding of modern scientific knowledge, leads to the development of thinking skills.

Great emphasis is placed on the use of integrated learning in the learning process. The structure of integrated lessons requires the accuracy and consistency of the materials studied at all stages of learning, thorough study and logical interrelationships. This includes the conciseness and conciseness of the curriculum. For example: All the topics of the 1st and 2nd grade “Getting to know the world” course are closely related to each other. Grades 3 and 4 will continue the Natural Science course. Students will be introduced to the study of the environment, reading, speech development, mathematics, and labor education, which will include seasonal changes in nature and human labor. Therefore, the course "Introduction to the environment" allows the teacher to work on the formation of concepts about the environment in all classes. Each subject in primary school is an integrated course, in terms of content they are inextricably linked with the natural-mathematical cycle. provides for the acquisition of knowledge about the environment that is understandable to school students.It is not only the emotional emotion of learning about nature in children of this age, but also the motivation to learn.They need to fill the needs of students with new content to support their interests.

It helps students to discover the interactions in life and to understand that man cannot live without the various nebulae in nature.

Interdisciplinary communication is one of the types of integration. The child uses natural sciences, reading, calligraphy and mathematics to develop speech. In nature lessons, speech development takes place in a free environment, based on a lively interest in the objects being read. Images of free nature develop sensitivity in the child along with logic.

Each lesson addresses the issues of speech development, taking into account the specificity of the material studied and the expediency of choosing the topic of speech development. Students

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love such lessons. They give a lot of new, useful concepts, organize their imagination, students need to use what they learned in other lessons. In this case, children better master the material being studied, knowledge becomes a system and becomes very necessary for teachers.

An integrated lesson is offered in this regard, which helps to develop students 'ability to understand and apply the acquired knowledge in a new learning environment.

Integrated course development in mathematics and science.

Topic: Travel to Antarctica.

Course Objectives:

a) strengthening the skills of calculation, equations and problem solving.

b) fostering curiosity and self-control.

d) development of worldview and logical rotation;

Course type: travel

Course method: research

Classroom: mainland map, table, pictures.

The course.

I. organizational part

1. Mental attack:

-How many months of autumn is November?

-How many times should I measure before cutting once? - What makes food tasteless?

- Why can't you light a fire in the oven?

He was looking for a spring, a goat, a kid.

How many hooves do they have, How many feet, how many ears?

2. Open the notebook and write the date and class work.

II. The subject and purpose of the lesson are stated.

-Children, today we are going on an excursion. To find out where it is, you need to complete the following task. Solve the examples and find the hidden word.

ITND

25*20	108*9	14*11	700:35
525:5	900:6	1827:9	

RAK

Бунингучунҳарфларнимоскатакларгажойлаштиринг.

1 50	1 54	9 72	1 50	1 05	2 03	9 72	5 00	2 0	1 50
А	Н	Т	А	Р	К	Т	И	Д	А

Students find the word IN ANTARCTICA.

- What is in Antarctica? (Continent)

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- What do you know about this continent? (It is located at the South Pole). -Today we are going to travel to this continent. Strengthen your ability to perform operations and solve problems on multi-digit numbers along the way.

- In Antarctica - the coldest continent. It was Russian sailors

Discovered on January 28, 1920 y F.T. Belinshausen and M.P. Lazarev. III. We can find out the temperature on this continent by the following program:

120	14	96
39	21	46
9	32	18

1. Write the smallest number in row 1.

2. Write the largest number in row 2.

3. Write the middle number in row 3.

4. Find the sum of the three selected numbers. 14 + 46 + 18 = 78

So the air temperature is 780C.

IV.Now we find the face of the field in Antarctica.

It is known that it makes up 7/15 of the face of the African continent. The land area of Africa is 30,000,000 km2.

The winds in Antarctica are also very strong. Find the wind speed by solving the equation: 7x = 1260

x = 1260: 7 = 180 (m)

x = 180: 9 = 20 (m) Answer: 20m

VI. Antarctica has almost no flora and fauna. Only some animals live in the border areas. What do you know about penguins? There are 17 species of penguins in Antarctica. The largest is the imperial penguin and the smallest is called the adel. They are very floating and feed on fish, mollusks and turtles.

Now find out the height and weight of the emperor penguin in the following sequence:

42:6+17:4*2_____120см

36:4*5+15-18_____42кг

VII. The end of the lesson.

- What did you learn in class today? - What helped you? (Narrated by cluster)

a) Evaluation. Students who are active in the class, answer questions correctly and completely will be assessed with incentive cards.

a). Homework assignment.

Primary education not only forms the knowledge, skills and abilities set by the state educational standards, but also the formation of learning and skills related to the implementation of the child's personal qualities and qualities in life, adaptability skills, as well as a conscious attitude to current events. In order to achieve this goal, it is important to integrate the educational process, integrated teaching, emphasized in the concept of preschool education. In fact, according to the concept, the knowledge to be acquired by the student in a wide range of subjects in the direction of teaching them to see in relationships. should

These capabilities can also be used to measure the surface area of a figure. It is also

possible to make geometric figures from fruit seeds, natural resources, sticks from natural products, visual aids. forms their notions of the inanimate world.

In primary mathematics education, the goal is mainly focused on the formation of logical thinking, and in the process of learning, figurative logical thinking, which is a simpler form of logical thinking, is used. Logical thinking is logical thinking in pupils and students

to cultivate the culture, the knowledge needed to solve the problem

helps to work, to think correctly, to be critical of one's own and others' opinions during the debate, to be responsive, to understand the mistakes in the opinion of the interlocutor.

In the process of teaching on the basis of this figurative logical thinking, there are great opportunities to teach in nature, during festivals, using natural resources.

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