Pedagogical Cluster- Journal of Pedagogical Developments
PCJPD: Volume 2 Issue 4, April 2024, online: ISSN 2956-896X

PEDAGOGICAL CLUSTER
JOURNAL OF PEDAGOGICAL DEVELOPMENTS

Website: https://euroasianjournals.org/index.php/pc/index

"Mosaic" Strategy In Forming Primary Mathematical Concepts

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Abstract: This article shows the practical application of using the "Mosaic" strategy in the formation of mathematical concepts in elementary school students.

Key words: interactive learning, interactive methods, "Mosaic" strategy, dividing the sum by a number, finding the area of a rectangle.

Interactive education is a special form of organizing cognitive activity. It has very clear and predictable goals.One of these goals is to create favorable educational conditions in which the student feels his success, intellectual independence, which makes the educational process itself effective.The "Mosaic" strategy allows students to acquire a large amount of information in a short time, it serves as a way to solve a complex problem that requires specific knowledge. It is a very interesting and effective way of learning. This method involves all students in educational activities, allows joint search for solutions to problems, exchange of ideas, information and mathematical knowledge, and most importantly, develops critical thinking.

Such methods are student-oriented and allow solving a wide range of educational tasks: teaching, training and development.

In a dynamically changing world, it is important to help everyone have the opportunity to participate in cross-cultural interaction, build basic human skills in an open information space, and learn how to apply these skills.

The goal is to develop students' mental skills necessary for studying and everyday life: making informed decisions, working with information, analyzing, considering various aspects of the decision.We will consider the application of the "Mosaic" strategy in the study of the topic "Dividing the sum by a number" in the 2nd grade mathematics textbook.

Stage 1

Today in the lesson we will study the topic "Dividing sum by number".

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You have to discover this rule yourself, and for this you need to remember the multiplication table, the rules of the order of operations, the representation of the number in the form of a sum. We will be divided into three teams.

Stage 2

Before moving on to deriving a new rule, we repeat the rule of multiplying a sum by a number (Working in groups on numerical expressions, children remember the algorithm of multiplying a sum by a number).

Stage 3

Now we can move on to the "discovery" of the new rule.

Columns of expressions are written in three sections on the paper.

I cut these sections with scissors and give each team one option.

Step 4

- Now you work in groups.

Each team must guess how the expressions in each column are written.

To do this, calculate their values, and then try to form a rule for dividing the sum by a number.

56 : 8	63 : 9	72 : 8
(35 + 21) : 7	(49 + 14) : 7	(27 + 45) : 9
35 : 7 + 21: 7	49 : 7 + 14:7	27 : 9 + 45: 9

Step 5

- If we compare the results obtained during our research.

What wording of the rule did you get?

Step 6

We have obtained three formulas for the rule for dividing a sum by a number. Let's choose one, but the most obvious. All teams participate in the debate. As a result, it is concluded that each of the two sums should be divided by a certain number and the resulting division values should be added.

To reinforce the knowledge of the accepted rule, the students are invited to write columns of expressions according to the same rule for cases 36:4, 48:6, 81:9.We will consider the use of the "Mosaic" strategy in the study of the topic "Cutting shapes, folding polygons" in the 4th grade mathematics textbook.

Stage 1

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- Today in the lesson we will remember the familiar methods of finding the face of a quadrilateral and learn a new one. We choose the most convenient way to find the face of a rectangle. We will be divided into three teams.

Stage 2

- Let's remember the methods known to us to find the face of a rectangle. You name them and I write them on paper (children name two methods: measuring with a palette, counting square units).We know that to find the face of a rectangle, first measure the width and height of the shape and then multiply them.

Stage 3

- We have three ways.

They are written on watman paper, in different parts. I cut these pieces out with scissors and give each team one option to find the face of the rectangle.

Step 4

- Now you work in groups.

Each team has its own rectangle.You find its face as it is written on your received card, make the necessary measurements, calculations and bring it all together with notes in the notebook. After finding a face in this way, you give the card to the neighboring team and get a new one.

So until each team uses three methods.

Step 5

- Now we will compare the results obtained during our research.

What can you say about your results?

- The results are the same.

Step 6

- We remembered certain methods of finding the face of a quadrilateral and got acquainted with a new one.

What else should we do?

- Choose the most convenient way to find the face of the rectangle.
- That's right!

Let's discuss which method is more convenient?

All teams participate in the debate.

As a result, it is concluded that it is more reasonable to find the face of the rectangle by calculation (multiplying the width and height), because unlike the other two, it does not require special devices and is done in less time.Such interactive teaching methods require certain changes in classroom life, as well

as a lot of preparation time from both the student and the teacher. You should start by applying these methods step by step.

Both the teacher and students need to get used to them and gain some experience in using them. It is better to carefully prepare several interactive activities during the school year than to often hastily prepared "games". The use of interactive methods is a means to achieve an atmosphere in the classroom that best contributes to the understanding of the spirit of law and civil society as a spirit of cooperation, mutual understanding, goodwill.

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