INTERESTING ISSUES AFFECTING THE CREATIVE ACTIVITY OF SCHOOL STUDENTS AND THE SIGNIFICANCE OF THEIR APPLICATION IN MATHEMATICS LESSONS

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Abstract: We believe that the introduction of interesting issues from the primary grades of general education schools is one of the main factors affecting the quality of the lessons. During the lesson, it is observed that students get bored with specific algorithmic examples and problems. In such cases, giving them problems of a slightly different nature, based on logical thinking rather than calculation, increases the interest of almost all students in the class.
This article describes the use of interesting issues that affect the creative activity of students in elementary mathematics classes and specific ideas aimed at developing students' ability to think logically.
Keywords: interesting issues, creative activity

Interesting questions are one of the effective means of developing creative activity. Such issues require the development of a specific method of achieving the goal, and its accurate and precise description. Interesting problems attract children to creative search activities, contribute to the development of many general intellectual skills. The ability to work with algorithms to solve interesting problems, that is, to plan a sequence of actions to achieve a goal, as well as to solve a wide class of problems, and not in the form of numbers or reports.

It is necessary to identify new features of a specific situation with a creative approach to the issue. This is especially important when dealing with interesting problems with unique solutions. In such tasks, the problem itself is not always clearly defined, and therefore needs a final formulation. In order to formulate a problem situation, it is necessary to make the following decisions: distinguishing the problem and the criteria for an acceptable solution, and choosing the optimal path leading to the solution of the problem. Let's consider the following problem as an example:

One of the 9 coins is fake, it differs from the others only in its weight. How many times can you detect a counterfeit coin by weighing it on Pallali scale?

The paths leading to the answer of this problem can be an example of a branching algorithm. Because of this, students solve this problem in different ways. For example, some students weigh 9 coins out of 4 equal ones and find the counterfeit coin in three tries. Some of them can divide 9 coins into 2 and solve the problem in three attempts. In fact, students who put a set of coins into groups of 3 and then try to find the solution to the problem will find the solution in two tries, which is the correct way to solve the problem. Because there is a sentence "at least" in the clause. This problem belongs to the type of problems that have a text representation of the solution that we mentioned above.

It is appropriate to use block table recovery problems to teach how to construct schemes when solving uninteresting network problems. At the same time, students analyze each block

of the diagram, identify possible options for filling in the missing blocks, which helps to develop mental flexibility. These issues also have a developmental effect, because the students' activity in completing the ready-made scheme is based on intellectual abilities such as analyzing, summarizing, comparing and drawing conclusions from these conditions.

Tasks of creating heuristic algorithms include problems oriented to practical implementation. An example of these issues is as follows:

How can you collect 4 liters of water from a spring using a five liter jar and a three liter jar?

It is convenient to present the solution of the problem in the form of a table, and the students are prevented from getting confused with the help of the table.

If we take a closer look at the methods of solving problems oriented to practical implementation, it can be determined that there are at least two ways of solving problems. Which of them will be the optimal solution depends on the ability and imagination of the student. Such issues shape the variability and dialectical thinking of students, which is very important for the development of their creative activity. In order to practice the skills of finding intermediate values of problems oriented to practical implementation, it is appropriate to invite students to complete the problem of filling the table according to the given algorithm.

Solving problems focused on practical implementation helps to form the concept of "algorithm", to develop the skills of creating and executing algorithms, as well as to develop calculation skills. As students complete each step of the table in the above problem, students must determine how much liquid is in each container, how much space is in each container, how much liquid can be poured, and so on. Thus, students need to solve many small problems and generalize them to find a clear solution to the given problem. To solve these problems, first of all, it is necessary to show students a special technique of analyzing them and finding a solution. Students use different approaches to solve them. It contributes to the child's creative development and increases interest in mathematics.

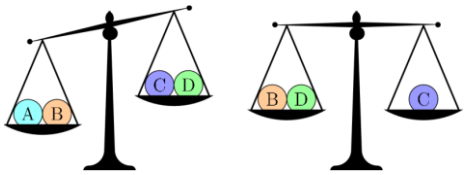
When solving problems, we use the expressions "standard" and "interesting". Most, most problems in elementary math textbooks are standard solution problems. That is, the given problem refers to a certain type, and there is a way to solve it according to its characteristics. For example, solutions to problems related to adding a sum to a number or subtracting a sum from a number are performed according to a specific rule.

In problems-assignments with an interesting way of solution, a solution is not sought based on any specific instructions, but based on the content of the problem, a "new", "original" way of solving the problem is sought. That's where it gets interesting. In children, interesting problems, the algorithm of the solution of which is unclear, cause some difficulty. The exact same problem can be standard or fun, depending on whether the teacher has taught you how to solve such problems.

In order to solve interesting problems, on the one hand, it is necessary to form general skills of solving problems in students, and on the other hand, to introduce them to special methods. In other cases, in order to effectively solve interesting problems, it is enough for the student to know how to analyze it well and determine the relationship between the quantities, the information given in each problem, the available data and the sought numbers. Reasoning to solve such problems is one of the best ways to find a solution to the problem. We would like to show an example of such a method of solving interesting problems:

Consider the following problem:

Matter. Balls A, B, C, D are placed on the scale as shown in the picture. If the masses of each can be 10g or 20g or 30g or 40g, which letter ball corresponds to 30g?



Solving. The given problem is really a bit confusing. Here, the reader is required to be careful and perform the algorithm correctly. It is possible to easily start thinking from the scale on the right side, even if it seems that there is no link to its solution. Since the masses are 10, 20, 30, and 40 grams, and the scales on the right are equal, ball C weighs 30 grams or 40 grams. 10+20=30 or 10+30=40 according to the equation B+D=C. Suppose that C=40 g. Then the value of D will be equal to 10g or 30g. In both cases, the scales on the left are not satisfied. So C corresponds to a 30-gram ball. Answer. C.

It is very important to give questions like the ones above that develop critical thinking. Because in this process, dormant cells in the student's brain begin to activate and provide several ways for the student who is interested in the problem to get to the right solution.

Any issue taken in isolation can be interesting. Add a few similar issues next to it and it will become standard. This research requires students to make an active effort to develop general problem-solving skills rather than working on the same problems.

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