WAYS TO ACQUIRE KNOWLEDGE, SKILLS AND ABILITIES THROUGH PROBLEM SOLVING

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Abstract: *this article provides ideas on ways to improve knowledge, skills and abilities of special and auxiliary school students in mathematics by solving problems. The stages of formation of students' problem-solving skills in special schools, methods of explaining mathematics in detail are highlighted.*

Key words and phrases: *problem, knowledge, skill, skill, method, analysis, known, unknown.*

Students should acquire this knowledge, skills and abilities by solving problems.

1. To teach to understand and remember the condition of the problem.

Work on the issue begins with mastering its content. In the early stages, when students do not yet have reading skills, they should be taught to listen to the text of the problem that the teacher reads or speaks, and to distinguish the important elements of its condition. After that, unfamiliar words that appear in the context of the problem will be considered. It is necessary to teach students from the 2nd grade to read the text of the problem expressively.

Students must not only remember the problem statement and question, but also understand the existing connections between the given information and the sought quantities. This skill is formed slowly in mentally retarded children.

1. Preliminary analysis of the issue. Separating the known from the unknown, the important from the unimportant, opening the connection between what is given in the problem and what is sought - this is one of the most important skills, without having such a skill, one cannot learn to solve problems independently.

Unfortunately, in teaching practice, teaching students to solve simple problems is often done as follows: the teacher reads or tells the condition of the problem. After that, the teacher addresses the students with such a question without analyzing the issue. Who will solve this problem for me independently. One of the students stands up and tells the answer to the problem he solved. If the problem is solved correctly, the teacher praises it and puts it on the board.

He writes the solution to the problem on the board, and the rest of the children copy it from the board.

1. The ability to write a short issue

Starting from the third grade, children are taught to independently write short problems.

It should be noted that in all cases, the analysis of the condition of the issue is carried out simultaneously with the execution of the short record.

In the text of many problems, there are words (such as more, less, left, all), which indicate the choice of arithmetic operations, but it is not possible to rely only on them when choosing operations. can lead to the wrong choice. Therefore, if the problem contains the words "was", "all" or "total", then add them; if there is a word "remained" in the question, then it is not appropriate to say that it is necessary to subtract.

When solving a problem, the choice of actions is determined by the relationship between the known and the unknown in the problem.

The ability to analyze the problem is of primary importance in solving a complex problem. There are two methods of analysis: 1) synthetic analysis, 2) analytical analysis.

In the lower grades of the auxiliary school (grades 1, 3), reasoning in the analysis of the problem often depends on the question of the numerical data of the problem. Starting from the 4th grade, reasoning starts with the question of the problem and goes towards the numerical data.

5. Solve the problem, write the solution and express the answer.

In the first grade, at the beginning of the school year, students do not know the letters and cannot write them. Therefore, the solution of the problem is written anonymously with an arithmetic operation. To separate the action from the example, it is written in the middle of the line. As the letters are learned, students are taught to write the solution to the problem with the name.

In the secondary school, writing the solution to the problem is done in different ways

6. Teaching to check the solution of the problem.

Checking the solution of the problem is not only of general educational value, but also has the value of correcting the shortcomings.

The word to check the solution of a problem is to determine whether the solution is correct or incorrect.

Observations show that experienced teachers of auxiliary schools widely use students' own problems as one of the methods of teaching problem solving.

It is of the first importance that mentally retarded children solve the problems they have created. The importance of solving an independently structured problem is that this work directly shows how to apply theoretical knowledge in practice. Secondary school students have great difficulty solving life problems. In order to eliminate the same deficiency, it is important to create independent problems and solve them.

Problem solving by students is of great importance in connecting mathematics teaching with life, in developing children's generalization skills, and in-depth mastering of a number of mathematical concepts.

Students can be offered options to complete the problem.

1. Creating a problem based on staging. The teacher gives 5 pencils to one student and 2 pencils to another and asks them to put them in a box. Then the teacher closes the box and says "make a problem".

2. Compose a problem based on a picture, poster, scheme, drawings. For example, there is a picture of two boxes of pencils on the poster. 6 pencils in one box are visible. The second box is closed and it says: 2 pencils less. Pupils should make a problem based on the picture.

3. Compose a problem based on numerical data: "Make a problem with the participation of the numbers 8 and 10."

4. Creating a problem based on a ready solution. "Create a problem so that it can be solved as follows: take 5. + take 3 = take 8".

5. Compile the issue according to the prepared plan.

6. Compose a problem related to the indicated arithmetic implementation.

7. Creating a problem similar to the solved problem: "Create a similar problem, but with different numbers and objects."

It is necessary to pay more attention to students' independent work by classifying them and approaching them individually when solving arithmetical problems.

It is possible to achieve high results in teaching only after taking into account individual mental differences of students during the educational process. At this point, it should be mentioned that the one-to-one approach, taking into account personal difficulties, is effective only when it is regularly carried out at all stages of teaching: in the presentation of new material, independent performance of exercises, asking students and giving homework. can be.

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