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THEORETICAL AND PRACTICAL FEATURES OF WORKING ON PROBLEMS IN MATHEMATICS LESSONS

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ANNOTATION

Within the framework of the article, the features of problem solving as an important component in mathematics lessons are theoretically and practically substantiated. The stages of problem solving, independent problem solving skills are discussed.

Keywords : Problems, mathematical relations, simple and complex problems, arithmetic operations

Problem solving is an important part of teaching math. It is impossible to imagine mastering mathematics without solving the problem. Problem solving in mathematics is a natural way to put theory into practice. Problem-solving plays an important role in the process of mastering the theoretical material studied in the primary grades. The program states: “The study of arithmetic of natural numbers and zeros is based on a system of practical problems and practical work. This means that the content of each new concept is always associated with solving a problem that requires an application of the concept, which helps to explain its significance.”

Students are introduced to mathematical relationships through problem-solving. There are two main types of problems: simple and complex. Problems that require a single action to solve are simple problems. Problems that require several interrelated steps to solve are said to be complex. Simple problems provide a foundation for students to build the knowledge, skills, and abilities they need to solve complex problems.Both simple and complex problems serve to acquire, consolidate and improve knowledge. Problems are a useful tool for developing children's thinking skills and usually contain "hidden" information. Searching for this information requires the problem solver to approach analysis and synthesis independently, to compare facts, to generalize, and so on. Teaching these skills is one of the most important goals in teaching math.

Teaching problem-solving independently allows the teacher to use the reserves of possible mental abilities of the students. This leads to another important function of issues. Problem-solving develops interest in the subject, independence, freedom, assertiveness, diligence, purposefulness. By teaching problem-solving, students are introduced to various elements of education. The issues help to broaden students ’horizons, introducing them to their personal, village life and people’s work in production and agriculture.

It is also important to know how to solve problems in different ways. Children need to learn to use their knowledge of the properties of arithmetic to solve problems. The goal, the program says, is for students to be able to identify possible ways to solve a problem and to choose the most comprehensible of these methods. In addition to solving ready-made problems, it is useful to train children to create independent problems according to different tasks of the teacher. Numbers and plots help them to understand and solve problems.

Working on issues involves several steps. The first is to listen to the problem and read it independently. Working on an issue begins with mastering its content. Teach students to listen to the text of the problem that the teacher is reading, and to distinguish the important elements of the condition aloud in the early stages of their reading skills. Once students have mastered reading skills, each student should not only listen to the text of the problem, but also read the problem independently in order to better master the context of the problem. They may be asked to read the issue aloud first, then again aloud and expressively. In expressive reading of a problem, it is necessary to distinguish between numerical data and sound elements that are important for solving the problem.

For example: They bought 4 boxes of blue and 5 boxes of red paper for labor lessons. How many bundles of paper did they buy for the labor classes in total?

When reading this question, the words "4 packs of blue", "5 packs of red" and "all" should be read aloud. The text of the question is carefully read twice by the teacher or students. However, it is necessary to gradually teach children to understand the content of the text as soon as they read it. To do this, it is important to ask guiding questions and assignments to get students' attention. Assignments may be simple at first and then more complex. The teacher should not just give the instruction to “listen carefully,” but should also give the students a specific additional task that is important to know. M: He might say, "Listen carefully to the text and be prepared to repeat it."This is the simplest task. It can be used in the early stages of education. Then the tasks become more complicated: "I'll tell you the problem now," said the teacher, "and be prepared to tell you what is known and what you need to know." In this case, students begin to work actively while listening to the text of the problem. M.I. According to Moro, students perform a kind of "sorting" of the text, separating the known from the unknown. As students listen to the text of the problem, they need to understand the context of the problem, the question, and the relationship between what is being given and what is being sought. Students will be able to solve problems independently only if they listen carefully and have the skills to read independently.

One of the most important skills is to separate the known from the unknown, the important from the insignificant, to open the connection between what is given and what is sought. It is impossible to learn to solve problems independently without such skills. At the beginning of the problem, students are introduced to the components of the problem. M-n: One box contains 7 pieces of plasticine and the other box contains 2 more pieces of plasticine. How many pieces of plasticine are in both boxes? After reading the text of the problem, the teacher asks the students the following question. (Before reading the question, students are asked to listen to the question and identify the known and unknown from it):

- What do you guys know about it? (It is known that one box contains 7 pieces and the other 2 pieces more plasticine).

- What does this tell about the matter? (This is a condition of the issue).
- What is unknown? (It is unknown how many pieces of plasticine are in both boxes.)
- What does this tell about the matter? (Question of matter).

A short summary of the content of the problem is the basis for students' memory to understand and distinguish numerical information. At the same time, their concise writing allows us to understand what is given in the matter and what to look for. A brief note of the matter

a) full condition

b) partiality condition

c) in schematic form

g) in tabular form

d) can be expressed in the form of a short note.

A brief note of the above issue:

1-b – 7 pieces

2-b– ? 2 pieces more } ?

The content of the case can be illustrated. To do this, draw a picture of two plasticine boxes. The first box contains 7 pieces, and the second box contains as many and more than 2 pieces of plasticine. Conditional definition of the content of the problem, that is, instead of plasticine can be drawn rectangles or sections.

1-b-□□□□□□□

2-b-□□□□□□□□□ } ?

To describe the contents of the case using a drawing, each cell of the notebook is taken for a single plasticine. In this case, the 7 pieces of plasticine in the first box are represented by a cross-section of 7 grids. The plasticine in the second box is represented by an incision of the same length and another 2 inches in length.

A brief note of the contents of the case

1-b-

2-b- } ?

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A brief description of the issues can also be described using a table.

For example: 12 kg of honey was poured into 4 identical jars How many kg of honey are there in 3 jars?

In conclusion, it is important for students to be able to correctly distinguish the sizes of the problems and to establish the connections between them. To do this, you need to create a short description of the problem in such a way that it allows you to determine the relationship between the sizes.

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