

Problems of Drawing and Construction in Year III Mathematics Lessons

Rabbimov Muzraf

Associate Professor, Jizzakh State Pedagogic Institute, Jizzakh, Uzbekistan

ABSTRACT

This article describes the formation of students' concepts of mathematics on the basis of personal experience, the first condition for teaching methods, the first requirement is the principle that teaching process is connected with life, with the practical activities of students.

Keywords: *geometry, practical activities, innovative methods and teamwork in mathematics classes in year 3*

How to cite this paper: Rabbimov Muzraf "Problems of Drawing and Construction in Year III Mathematics Lessons" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-1, December 2020, pp.262-265, URL: www.ijtsrd.com/papers/ijtsrd35841.pdf



IJTSRD35841

Copyright © 2020 by author(s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



INTRODUCTION

In the mathematics course, it is important to explore the implementation of the requirements for the content of the primary school mathematics course, the organization of teaching as a whole and teaching methods, children encounter abstract concepts such as numbers, measurements, spatial figures. But this notion emerges as a reflection of the real relationships that exist between the objects and phenomena of the environment around us. Although mathematics is seen as abstract, it reveals the connections between being and consciousness, nature and science. The study, which combines the work experience of the most advanced teachers of the country, the achievements of pedagogy, says: "The study of mathematics helps children to form many foundations of the scientific worldview, their knowledge, helps to develop their abilities and nurture many good qualities. At the same time, it is planned to develop students' scientific thinking skills, the formation of special teaching methods".

The connection of teaching to life should be demonstrated not only in the teacher's speech, but also in the teacher's whole practical activities in the process of learning mathematics. Therefore, it is necessary to prove to the students that the teacher really renders assistance to solve mathematical knowledge with systematic independent work, which is the second condition of developmental education. Students understand the complexity of connections between theory and practice, draw and make When it comes to lessons,

Drawing and construction lessons in geometry are independent works that allow students to fully and deeply master the subjects taught under the guidance of the teacher, to form clear ideas. Drawing and making lessons from geometry is one of the manifestations of students and teacher-led learning activities. In the process of such reading, the construction and construction of geometric shapes, the resulting figures and the relationships between them are studied through educational, theoretical and practical research.

Drawing and making lessons have a positive effect on students' mastery of formulas and quantitative relationships through them, the ability to apply the acquired knowledge to solve various practical and theoretical problems. Drawing and making lessons are of great importance for the implementation of the perspective principle in teaching. The essence of this principle in relation to primary school is as follows. Gathering their ideas about geometric figures during the study of geometric material prepares them for the next systematic course of study by developing the skills of making geometric figures.

RESEARCH

Taking into account the individual characteristics of the student in the lesson is the most difficult, but at the same time important work for the teacher. Drawing and making lessons allow for differentiated teaching without disrupting the overall work rhythm. Drawing and making lessons are conducted in conjunction with the transition to previously

taught material. Based on the collection of geometric representations, the conditions necessary for the study of the next topics are created.

Drawing and making lessons are one of the best means of interdisciplinary communication, developing and improving

the student's self-control skills, curiosity and ingenuity. Many of the articles related to the lessons of drawing and construction of mathematics testify to the fact that this work is pedagogically expedient, and remains the property of advanced pedagogical experience in our country. Drawing and making in the teaching of mathematics in school

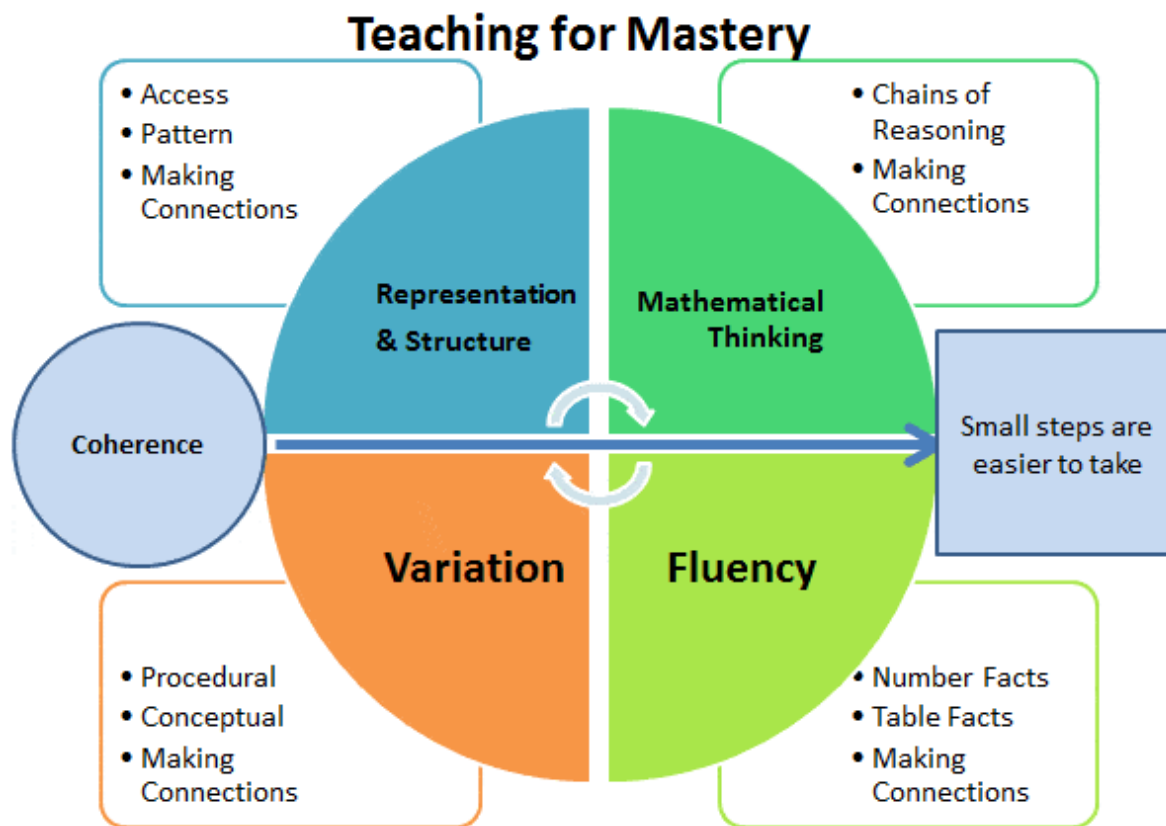


Figure-1. The CPA maths model in Teaching for Mastery (Source <https://thirdspacelearning.com/>)

In this figure-1 given the concept of 'mastery' was first proposed in 1968 by Benjamin Bloom. At this time the phrase 'learning for mastery' was used instead. Bloom believed students must achieve mastery in prerequisite knowledge before moving forward to learn subsequent information. Bloom suggested that if learners don't get something the first time, then they should be taught again and in different ways until they do. The idea of using lessons is widely reflected in the content, form, methods and types of mathematics education.

In drawing and construction classes, all work that requires a complex application of the methods of calculation, measurement, drawing, construction is relevant. Drawing and making classes can be divided into three groups: preparatory, basic and practical work. With the help of preparatory work, the materials necessary for the acquisition of new materials are repeated, the subject is put in a form that children can afford. By completing the basic work, students review and prove the properties of the figures being studied. The purpose of practical work is to apply the findings to practical and theoretical issues. As a result, children's knowledge is deepened and strengthened. The way of teaching in primary school has its own characteristics.

Here, in particular, it is necessary to take into account the age characteristics of children, the characteristics of the content of the subject.

Thus, both the organization and the technique and methodology of drawing and construction lessons in primary schools have their own characteristics.

The choice of drawing and making lessons topics can be based on considerations regarding their content.

1. Drawing and making lessons should be integral to the program material and should not go beyond the elementary math teaching system.
2. Assisting students as fully as possible in the formation of their ability to measure and build practical skills should facilitate their technical preparation.
3. The work should also include those that require students to apply not only relevant data and reports from geometry, but also a complex application of known mathematical knowledge. The methodology of drawing and construction lessons should be such that, first of all, the development of observation, knowledge of hypotheses and hypotheses and the ability to check, to refute misconceptions and generalizations by analogy, to improve students' cognitive abilities. Assist in the development of research-based learning activities:

Second: to assist in the performance of work, measurement, calculation, and acquisition of skills.

Third: these activities develop students' ability to perform tasks independently, to think, to experiment, to answer and draw conclusions independently, to use drawing tools in

independent work, and to develop skills and abilities to apply knowledge in practice. and should help strengthen.

The organization of drawing and construction lessons in primary schools has its own characteristics.

Students working with a set of geometric figures will return to many of the features of these figures and become familiar with other features. For example, when dividing squares into four equal parts, students easily notice that there are two ways to complete this task. They are once again convinced of the equality of the sides and angles of the square, and have a first idea of the symmetry of the square. It is important that all students in the class actively participate in these exercise so that one or two students are involved and the children do not become sluggish observers. For the whole idea of the students to be focused on the process of dividing the figures into equal pieces, each student should prepare circles cut out of paper rectangles. When dividing different figures into equal parts, and studying figures consisting of one, two, and so on, it is possible to enter the terms and definitions necessary to denote fractions. Thus, children's attention should be drawn to the study of the relationship between fractions, their names and how many equal parts the subject is divided into.

The question of the structure of drawing and construction lessons in mathematics requires special attention. The size of the puzzles given in the drawing and construction lessons sometimes covers all the semantic bases. Mastering these points provides a complete understanding of the topic being studied. According to its two structures, laboratory work can consist of either one independent assignment, or two, four, or more assignments. In the latter case, some of them can be done at home or in any part of the lesson, depending on the didactic purposes.

Students should have a special notebook divided into squares to draw drawings, pictures, diagrams in drawing and making classes, as well as a ruler, drawing, triangles and pencils. The teacher should explain to the students the rules for using drawing tools. For example, the basic rules for using a ruler are as follows. The edge on which the divider is placed is used only from its second edge to draw straight line sections that are convenient for measurement. The line should only be drawn with a pencil so that the ruler is not contaminated and the drawing is cut. Place the ruler on the paper so that the cross-sectional ruler being measured or drawn remains on the side where the light falls.

Before beginning it, the teacher should explain the need for orderly storage of drawing tools.

The ruler and pen should be clean, the sections of the ruler should be clearly visible, and the tip of the pen should be well opened. There should be a set of visual aids needed to demonstrate the characteristics of the figures being studied in the classroom, drawings made by students, demonstration drawings similar to diagrams, diagrams. To complete the drawings on the class board, a portion of the board must be squared. In drawing and construction classes, it is advisable to spend 10-12 minutes on graphic work and 8-10 minutes on exercises and research to learn new material.

Before starting work, the teacher tells the students the task, conducts a conversation, and demonstrates a drawing or model. Students listen carefully to the teacher and try to understand all aspects of the work to be done, participate in the conversation, that is, they can ask the teacher what they do not understand. The teacher should monitor the students as they do the work and help the students with the difficulty. Organization of the lesson, monitoring the work of students is an integral part of the lesson. The teacher evaluates the journal as a result of tracking students' movements throughout the lesson. By showing students their strengths and weaknesses, the teacher encourages their activities.

CONCLUSION

It is useful for some students to give them some free time after completing the work, which gives the students who are left behind a wide range of opportunities to catch up with their peers. By gradually shortening the breaks, it is possible to get the whole class to work at the same rate and fast enough. Breaks can be used for cross-checking self-checking assignments and student mutual assistance. If students are given an assignment, the text of the assignment is explained orally for some time in different ways, i.e. by demonstrating a model of visual aids, distributing to all students in the form of didactic material, each on the parts of the assignment. is read before the work is done, if the task is more difficult, the order of completion is explained and written on the board. The task is clear, concise, but should be explained in detail. The introductory conversation aims to make a practical and logical plan of the whole work.

In short, in the process of completing a task, they often have to switch between certain stages of the work. The teacher observes all the children's work and gives them explanations as they complete the work, if the assignments are difficult for the students, part of the assignment or the entire assignment is done by the student on the board. However, when completing assignments, the main focus should be on doing the work independently. After the children have completed each task, it is necessary to hold concluding interviews in order to consolidate and generalize the work.

REFERENCES

- [1] Jumaev ME et al. Methods of teaching mathematics in primary school. - T.: "Science and Technology", 2005, 312 pages.
- [2] Bikboeva NU and others. Methods of teaching mathematics in primary school. - T.: "Teacher" 1996, 512 pages.
- [3] Orrill, C. H., Sexton, S., Lee, S.-J., &Gerde, C. (2008). Mathematics teachers' abilities to use and make sense of drawn representations. In The International Conference of the Learning Sciences 2008:
- [4] Proceedings of ICLS 2008. Mahwah, NJ: International Society of the Learning Sciences.
- [5] Rabbimov, M., &Muzaffarov, M. (2020). БОШЛАНҒИЧ СИНФЛАРДА МУОММОЛИ ВАЗИЯТЛАР ОРҚАЛИ ТЕНГЛАМА ЕЧИШГА ЎРГАТИШ. *АрхивНаучныхПубликаций JSPI*.
- [6] Pantziara, M., Gagatsis, A. & Elia, I. (2009). Using diagrams as tools for the solution of non-routine

- mathematical problems. Educational Studies in Mathematics, 72, 39-60.
- [7] Rogers, E. M. (2003). Diffusion of innovations (5th Ed.). New York: Free Press.
- [8] Schoppek, W., &Tulis, M. (2010). Enhancing arithmetic and word-problem solving skills efficiently by individualized computer-assisted practice. The Journal of Educational Research, 103, 239-252.
- [9] Sharma, U., Loreman, T., &Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practices. Journal of Research in Special Educational Needs, 12, 12-21. doi: 10.1111/j.1471-3802.2011.01200.
- [11] Rabbimov, M., &Ro'ziqulova, E. (2020). MATEMATIKA DARSLARIDA PEDAGOGIK TEXNOLOGIYALARDAN FOYDALANIB O 'QITISH XUSUSIDA. *АрхивНаучныхПубликаций JSPI*.
- [12] Rabbimov, M., &Rizayeva, Z. (2020). BOSHLANG 'ICH SINF MATEMATIKA DARSLARIDA DIDAKTIK O 'YINLARDAN FOYDALANISH. *АрхивНаучныхПубликаций JSPI*.
- [13] Rabbimov, M., &Rabbimova, D. (2020). TA 'LIM QOIDALARIDAN SAMARALI FOYDALANIB, DARS SIFATINI OSHIRISH XUSUSIDA. *АрхивНаучныхПубликаций JSPI*.

