World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 23, June 2023
ISSN: 2749-361X

USE OF NON-STANDARD LESSONS IN MATHEMATICS AT SCHOOL

Madaminova Dildora Sattarovna,
Andijan city, 30-school named after A. Bakirov,
dildoraruzmatova73@gmail.com

Article history:

Received: 20th April 2023
Accepted: 11th May 2023
Published: 20th June 2023

Abstract:

The article is devoted to using unconventional forms and methods of organization of lesson activities. Non-standard math lessons play an important role in the development of students, increasing their motivation to learn. The optimal combination of traditional and non-traditional lessons increases the effectiveness of the educational process. The article gives a General classification of non-standard lessons by the nature of the methods and methods used. Examples of organizing nonstandard math lessons in high school are given, as well as non-standard methods of knowledge control are described. Recommendations for choosing the form of organization of lessons depending on the set educational goals are offered.

Keywords: mathematics, non-standard lessons, non-traditional forms of education, non-standard knowledge control

As practice shows, monotonous actions reduce interest in the activity, cause boredom, unwillingness to continue. Scheduled activities are no exception. If all lessons are held according to the same plan, monotonously and routinely, students may have a decrease in motivation to study.

In the context of the introduction of the Federal State Educational Standard, many teachers turn to non-traditional forms of organizing educational activities. Non–standard lessons include lessons that have an unconventional structure, their purpose is to form and maintain interest in learning. In the methodological literature, there is a wide variety of techniques and methods for conducting non-standard lessons, among which the following groups can be distinguished:

– cognitive type of lesson: object observation and research lessons, information retrieval lesson, as well as integrated lessons;

– creative lessons (creative type): essay, discussion, fantasy, fairy tale, game;

– communicative type of lesson: binary, with the participation of two teachers, conference, competition, debate, auction or creative report [4]. All these forms can be implemented when teaching mathematics. For example, in the 5th grade, when studying the concept of number, you can conduct a cognitive type lesson [8], a creative lesson in the form of a trip [1], a conference lesson [9]. A math teacher can use, according to methodologists [2, 5], non-standard forms also when conducting control of students' knowledge:

– the math relay race allows you to test your knowledge and skills with simple tasks. This type of control involves the sequential execution of examples with one command;

– mathematical dictation also involves the use of simple tasks and allows you to check the quality of assimilation of the material passed, or update previous knowledge;

– math quiz is used to repeat the material. The quiz can be conducted both for groups of students and individually for each student;

– at the end of the lesson, mathematical tournaments can be held, in which both tasks on the topic of the lesson and entertaining tasks can be used;

as an individual form of control, i.e. to determine the abilities and capabilities of individual students, various Olympiads and competitions, competitions like "kangaroo" can be used. A non-standard approach to organizing lessons allows you to activate the interest of students, teach them to work in a team, develop creativity, test students' knowledge, and ensure independent activity.

When choosing methods and forms of organizing such lessons, it is necessary, first of all, to determine which goal will be the main one. If the teacher sets a goal to increase interest in the subject, then, according to G.H. Voistinova and G.G. Sagitova [2], entertainment technologies should be used: games, competitions. The new material can be explained with the help of fairy-tale characters, and the lesson can be arranged in the form of a journey. To test your knowledge, use quizzes, contests and competitions. This approach is more suitable at the initial stage of education: in elementary school or in grades 5-6 when teaching mathematics.

In high school, as noted by methodologists [3, 7], it is possible to use quest technologies: sequential solution of one task after another (linear quest), using a list of tips that allow students to make their choice (assault quest), performing various tasks by participants to solve the final problem (ring quest).

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 23, June 2023
ISSN: 2749-361X

If the goal is to develop students' independence, then the lesson should serve as a platform for demonstrating students' knowledge. In this case, a math lesson can be held in the form of a conference or a debate. Students independently search for material on the topic of the lesson, make presentations, try to defend their point of view. For example, when solving a problem with different methods, the class is divided into groups. One group solves the problem arithmetically, the other graphically, etc. Then a discussion is held and each group must defend its own solution.

In addition, you can organize an essay on the practical application of mathematical knowledge or suggest writing a story in which the characters need to perform certain calculations.

As noted by A.V. Kosolapov [6], an interesting form of lesson organization in grades 5-6 is laboratory work in mathematics. Firstly, participation in laboratory work prepares students for laboratory work in physics and chemistry, which will be mandatory for them in high school. Secondly, laboratory work forms the scientific worldview of schoolchildren. At the beginning of the lesson, a hypothesis is put, which, with the help of experiments, should either be confirmed or refuted. As the purpose of laboratory work, we can consider finding the arithmetic mean, determining the average speed of a student on the way home from school, determining the light area of the room, etc.

Project activity has gained particular popularity in the modern school.The design and research method assumes, from the point of view of L.V. Shlyapin[11], independent work of the student with information, forms skills of analysis and generalization, teaches preparation of presentations and speeches. The teacher acts as a leader, guiding the student, providing him with support.

Non-standard lessons are aimed at overcoming established stereotypes, changing the usual ways of communication, making the studied material more visual. As S.R. Umarkhadzhieva notes [10], as a result, a deeper, emotional perception of new material occurs, the quality of assimilation of the essence and content of mathematical information increases.

Through non-traditional lessons, it is possible to stimulate the development of personal, meta-subject and subject-specific universal learning activities, as required by new educational standards. At the same time, there are a number of difficulties in using non-standard classes at school. The teacher must have a good command of the technologies used, be prepared for the occurrence of unplanned events. The lesson itself should be interesting and memorable, therefore, the teacher should pay more attention to the content of the educational material, the construction of the didactic process. It is impossible to overload the program with a large number of non-standard lessons, as this can lead to a loss of sustained interest in the subject and the educational process.

CONCLUSION. Summing up, I would like to draw attention to the fact that a non–standard lesson is an improvisation, the result of which is difficult to predict. In any course of a non-standard lesson, the teacher is required to be collected and attentive, he must lead the lesson, direct the activities of students, i.e. be an active participant throughout the lesson. The use of non-traditional forms in mathematics lessons has a positive effect on the development of creative abilities and logical thinking, increases interest and motivation to study, but only if sufficient attention has been paid to the preparation.

REFERENCES

1. Andrienko A.V., Alexandrova Z.A. Lesson travel as an unconventional form of teaching mathematics students in the fifth grade // Innovations in science and practice: Sat. Art. Mater. Int. scientific-practical conf. - Ufa: Dendra, 2017 .--S. 43-48.
2. Voistinova G.Kh., Sagitova G.G. Some teaching methods for solving textual problems in mathematics // Design and implementation of mathematical education at school and university. - Ufa: Bashkir State University, 2015 .-- S. 26-31.
3. Voistinova G.Kh. Math quest / G.Kh. Voistinova, V.A. Vladimirtseva, T.A. Girfanov // Scientific and practical electronic journal Alley of Science. - 2018. - T. - 2. - No. 1 (17). - S. 225-229.
4. Zhdanova V.N., Ivashchenko E.V. Non-standard mathematics lessons as a means of increasing cognitive interest // Applied problems of the exact sciences: Mater. II. scientific-practical conf. - Armavir: RIO ASPU, 2018. –S. 290-293.
5. Kapustin S.G., Zvereva L.G. The use of non-traditional forms of control of knowledge in mathematics, as one of the factors improving the quality of education // International Journal of Humanities and Natural Sciences. - 2019. - No. 2-1. - S. 132-134.
6. Kosolapov A.V. The use of non-traditional forms of mathematics lessons as a means of increasing interest in the subject // Bulletin of

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 23, June 2023
ISSN: 2749-361X

scientific conferences. - 2019 .- No. 6-2. - S. 63-64.

7. Litvinova I.N. Mathematical quest as a modern form of gaming technology // St. Petersburg Educational Bulletin. - 2018. - No. 3 - C. 68-71