

TEACHING METHODOLOGY OF MATHEMATICS

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Abstract: Subject, goals and tasks, principles, classification of teaching methods, teaching methods in the process of teaching mathematics, interactive methods, use of modern pedagogical and information technologies, forms of teaching mathematics, students issues of diagnosis of knowledge, skills and qualifications are covered.

Keywords: Mathematics, focus, goal, knowledge, science and technology, algorithm, competence, technology.

The science of mathematics develops a person's intellect and attention, educates determination and will to achieve the intended goal, ensures algorithmic discipline and expands his thinking. Mathematics is the basis of knowledge of the universe, and it is important for the development of production, science and technology, revealing the specific laws of surrounding events and phenomena.

Mathematical literacy, awareness of scientific and technical innovations and the competence to use them – to be able to make personal, family, professional and economic plans based on accurate calculations, to be able to read various diagrams, drawings and models in daily activities, to ease human labor, to work It implies the formation of abilities to use science and technology innovations that increase productivity and lead to favorable conditions. These competencies are formed in students through general education subjects.

The subject of the methodology of primary education in mathematics consists of the following:

1. Justification of the intended purpose of teaching mathematics (why mathematics is taught, taught).
2. Irniy development of the content of mathematics teaching (what to teach) how to distribute the level of knowledge presented in a system in accordance with the age characteristics of students, ensure consistency in learning the basics of science, educational activities The burden of classes is eliminated, the content of education corresponds to the student's specific knowledge capabilities.
3. Scientific development of teaching methods (how to teach, i.e., what are the methods of educational work so that students acquire the economic knowledge, skills, abilities and mental activity that are needed today must be?
4. Teaching tools – use of textbooks, didactic materials, demonstration manuals and educational equipment (how to teach).
5. Scientific development of educational organization (how to organize lessons and extracurricular forms of education):

Mathematical methodology is related to pedagogy, psychology and youth psychology. Primary mathematics methodology is related to other science methodologies of education (methodology of mother tongue, science, art, work and other subjects). It is very important for the teacher to take this into account in order to properly implement interdisciplinary communication in teaching. Research methods are methods of obtaining scientific information for the purpose of creating legal connections, relationships, communication and scientific theory. Observation, experience, familiarization with school

documents, study of students' work, interviews and questionnaires are included in the scientific pedagogical research methods.

It is possible to show the following types of mathematics lessons in elementary grades.

a) Introduce students to new concepts, acquire new knowledge and skills

Making classes (calculation, graphic or problem-solving knowledge is formed in these classes);

) classes to strengthen new knowledge, skills, and abilities with the help of various exercises;

d) recapitulation, generalization lessons;

e) independent knowledge, skills and in order to prevent mistakes at the next stage

skill testing classes.

Different didactic goals can be implemented in each lesson:

check homework;

explain the purpose of the lesson and the topic;

preparing students to master new material by repeating what was previously learned;

special exercises for oral calculation, study of new material (the main part of the lesson);

strengthening the previously acquired knowledge and skills of the child; calculation of learned knowledge;

exercise, application of knowledge and skills (the main part of the lesson);

independent use of students and its verification;

repetition of previously mastered material;

giving homework; summarize the lesson

In teaching mathematics, it is important to check whether students have solved examples and problems correctly. When assessing the knowledge of mathematics, it is necessary to take into account not only the presence of this or that knowledge in the minds of students according to the requirements of the program, but also the following that characterize its quality:

1) students' judgments and concepts correspond to the object being taught;

2) accuracy, that is, accuracy of detail;

3) completeness, i.e. sufficient and complete reasoning and understanding of objects and processes;

4) to reflect the important features, concepts and considerations of the object in practice;

5) consciousness, that is, the ability to understand the connection between concepts and to justify reasoning;

6) durability, i.e. long retention in the memory of students. Examination and assessment of students' knowledge is common to all subjects in didactics.

The issue of knowledge verification and evaluation is to determine the rating of the student's mastery of the educational material, the level of knowledge acquisition in the program, and the formation of qualifications and skills for the teacher.

For the use of new pedagogical technologies or information technology in the teaching of geometry in secondary schools

From programs: HTML editors such as Macromedia Flash, Microsoft Front Page and

Software tools such as Microsoft Word, Adobe Photoshop, Corel Draw can be used. If geometry is taught with the help of information technologies, the following will be achieved:

- ✓ using the possibilities of the electronic study guide, the opportunity to fully explain the subject to the students increases; ✓ their knowledge, skills and qualifications increase;
- ✓ moving images and animations play an important role in expanding students' imaginations;
- ✓ more time is allocated to practical work, i.e. solving examples and problems, giving life examples, conducting question-and-answer sessions among students; ✓ students' ability to think creatively is formed;
- ✓ students get a positive lesson from the lesson, their interest in the lesson increases;
- ✓ gives students the opportunity to develop spatial imagination, logical thinking, learn practical methods of geometric measurement and construction

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