

THE EFFECTIVENESS OF THE ORGANIZATION OF THE EXTRA CURRICULAR ACTIVITY "YOUNG ENGINEERS"

Sultonov Safar Nabiyevich

TSTU .TF Teacher

ANNOTATION

Extracurricular activities include: Engineering Graphics Circles, Nights, Engineering Graphics Weekly, Quizzes, Contests, Posters, Preparation and Drawing Geometry, Working with Additional Literature on Mechanical Drawing, etc. Excursions to various manufacturing enterprises, design institutes and other facilities, various activities on student design creativity, the latest types of Olympiads, conferences, through which the formation of all basic competencies are described.

REQUIREMENTS

Homework and arithmetic graphic assignments are of special importance in the formation and development of independent learning activities of students as extracurricular activities. A much more common type of independent learning activity is homework: arithmetic, graphic assignments, or experimentation. The preparation of homework is characterized by the fact that students perform their homework without the direct involvement of the teacher. The relevance of the topic is that the performance of completely independent accounting graphic tasks is manifested only in the fact that he personally performs it by imagining an independent accounting graphic task. A superficial view of giving home account graphic assignments is not conducive to having a secondary attitude to it. Coherent completion of the calculation graphic task training the most important element of the lesson is the clear and perfect drawing explanation of the basic organizational form by the teacher. Improving the effectiveness of the lesson will depend to a certain extent on the ability of students to perform graphic work on the account and the quality of drawing. Students will have different types of memory, graphic geometry and engineering graphics will depend more on the ability of students to imagine, so a certain part of them will complete the learning material during the lesson and can not master. Many of them will need to draw independently using the literature after the teacher has explained the topic and see and remember its main idea and structure. Others feel the need for teachers to explain and draw the drawing at home in order to take the drawing into class and remember the intricacies of the drawing. Even if the student has mastered the drawing assignment in class, giving him or her homework is just a sketch on the topic it is useful not only to rework the assignment, but also to assign tasks to do homework, to do creative work. The absence of external influences opens up a wide range of student opportunities for independent work. In the process of working on the textbook drawing, the student's ability to imagine increases, the ability to think independently is formed, and a new quality of learning is formed. At the same time, engineering graphics drawings and projects for students is not an obligation of the educational process, rather, it becomes a fun exercise. The organization of independent learning activities at home can be divided into 3 stages: preparation of drawing tools for work or organizational work, independent work and self-control, as well as correction

of errors in the drawing. and determine an approximate independent work plan, taking into account self-monitoring methods. Teachers often schedule student accounts, give brief or detailed instructions orally, in writing, along with assignments.

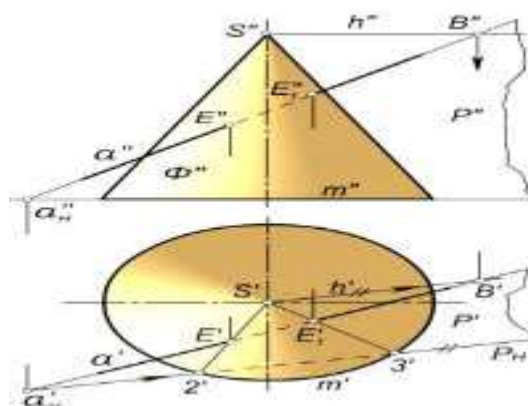
To make it easier for students to draw drawings independently of the subject of engineering graphics, they can be given examples of solving the necessary characteristic drawing problems as a handout. A thorough introduction to structured examples of solving chima problems will increase the effectiveness of students' independent work in completing homework. Students initially stage drawing problems based on the principle of analogy. As a result, they try to innovate in the future by completing typical new drawing problems as well as drawing problems that require an independent creative approach. In addition to the general math graphic assignments for all students in the classroom (e.g., working with a textbook, drawing drawing problems), gifted students sometimes need to be given more complex arithmetic graphic assignments individually which differs from others in the performance of homework. It is important to prepare them for various competitions, Olympiads and to meet their individual needs. In order to increase the effectiveness of preparation for the Olympiad during the academic year, it is advisable to hold competitions among 1st year students in the field of descriptive geometry and engineering graphics, as well as to prepare them for the Olympiad is the high efficiency of education. Extracurricular graphic work can be organized in the following forms. I. Increase interest in individual drawing: reading textbooks, manuals and additional literature, magazines; preparation of abstracts and problem solving; participation in correspondence olympiads; doing graphic tasks at home; drawing a given model depends on the execution of the spread on the basis of the drawing and the creation of the task of this model on the basis of the completed spread. II. In groups: "Young Engineers" circle on the subject of engineering graphics; "Auto CAD" circle; research group; excursion. Popular: engineering graphics olympiads, quizzes; evenings; newspaper competition. Students learn more about engineering graphics, make project drawings, make models, prepare exhibitions, study the work of scientists in descriptive geometry and engineering graphics, solve problems of descriptive geometry, learn from the knowledge of engineering graphics, want to know how to use and get acquainted with the latest achievements of science. One of the most important tasks of extracurricular activities is to satisfy these desires of students, strengthen their interest in the science of engineering graphics, increase and develop the activity of independent work, and to achieve the preparation of component students. Among the extracurricular activities, the circle has its own long duration, seewith the p edge is more efficient and significant than others. Students participate in the circle on a voluntary basis.

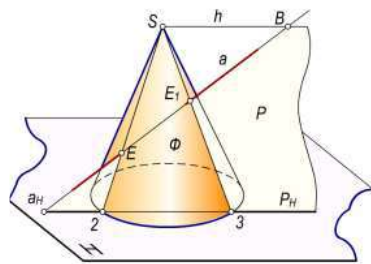
Today, a number of schools and clubs operate in the country. The work of the engineering graphics science circle can be as diverse as mentioned above. The Engineering Graphics Circle has the following: Drawing Mechanical Drawings; conducting experimental research; study of the principles of operation of machines and mechanisms; conducting public events; working with and making technical drawings; creation of new schemes; Didactic games on the subject of descriptive geometry and engineering graphics The organization develops basic competencies in students due to the fact that such aspects as the study of the creativity of technical science scientists have been tested. The form of work in engineering graphics circles can be different,

but the goal is the same, that is, to deepen students' knowledge, develop their interest in science and technology, teach them to apply their knowledge in practice, expand and strengthen their knowledge in the classroom. At the same time, students are married and workb are prepared to participate in the release and contain the qualities of self-development. The choice of topics for the engineering graphics circle is the most pressing issue. The modernity of the themes of the circles is of great importance. Views in the Engineering Graphics Room, Axonometric Projections, Sampling of Distributions of Various Details and Models, as well as Enrichment with Various Spare Parts of Machinery and Other Technical Visual Aidssuch as enrichment. This is a practical novelty for the student, even if the circles create layouts that are already known to the students. No matter how useful a circle lesson is to a student, students should not be overwhelmed. It is known that in most children, the interest in engineering graphics and technology awakens from kindergarten and then strengthens in the classroom at school. In radio broadcasts and television showsn Based on the information obtained and the parents 'science and technology stories, students will gain a number of insights. Much attention was paid to the Olympiad of young engineers, which is one of the main types of extracurricular activities. Ways to improve the methods of its organization and implementation have been identified. The choice of Olympic details is especially noteworthy. The purpose of the Young Engineering Olympiad in higher education is to inform students about the achievements of technical science and scientific issues.to arouse, develop and strengthen relative interest, to teach students to think correctly, to be creative, and to cultivate in them the buds of scientific research. At the beginning of the academic year, the plan for organizing and conducting the Olympiad will be determined and the judges will be appointed. A library should be set up in the engineering graphics room to help the Olympians. The task chosen for the Olympiad is interesting, experimental in nature, a variety of more complex issuesi must be able to design drawings using literature.

PUZZLE: Determine the points of intersection of a straight line with the surface of a right circular cone whose base belongs to the plane H? **Solution.**

SOLUTION: In this case, the auxiliary plane passing through the straight line a passes through the end of the cone. In Figures 16.10 and 16.11, such a plane P is given by the intersecting straight lines a and h. In this case, a horizontal straight line h is drawn through the end S of the cone: $h \ni S$. This hthe horizontal straight line intersects the given straight line a at point B.





REFERENCES

1. Babansky Yu.K. Methodology for teaching physics in high school. –M .: Education. 1968. - 199 s.
2. O.F. Kabardin Methodological foundations of a physical experiment. // J. Physics at school. 1985. No. 2. P. 3–9.
3. Pyorishkin A.V. Fundamentals of physics teaching methods. - T .: Teacher. 1990. - 320 p.
4. Yusupov A., Yusupov R. A set of questions and problems from physics. –T .: Teacher. 2000. - 64b.