



THE ROLE OF MODERN BIOLOGY CLASSROOMS IN SECONDARY SCHOOLS IN INCREASING THE EFFECTIVENESS OF LESSONS

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ABSTRACT: - This article aims to increase the interest and knowledge of students studying in secondary schools in the science of biology In the process of development, recommendations are given on the organization of a biology room that can meet modern requirements in order to form skills.

KEYWORDS: School biology room, aesthetic requirements, hygiene requirements, safety, natural medicines, visual aids, electronic board, computer.

INTRODUCTION

The process of acquiring knowledge, skills and abilities of students on the basis of the biology curriculum, ie the main part of the activity depends on the biology classroom and its level of equipment. The school biology room is a separate study of the school is a

department equipped with equipment that allows students to learn biology lessons, extracurricular activities, extracurricular activities has a positive impact on the organization, management and activation of its activities. Biology classroom is specially equipped, teaching biology is a room

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designed to organize the process. The biology classroom also has a specific history. To teach early science. The designated rooms were similar to a museum that housed plant herbariums and animal chuchelas in glass cabinets. With the introduction of the research method in the process of education - laboratory and practical training in the educational process established laboratory rooms were established. The biology classroom was necessary for conducting laboratory and practical classes Since the 50s and 60s of the last century, schools have been organized to teach all subjects, including biology. Republic of Uzbekistan President Shavkat Mirziyoyev chaired a video conference on April 5 to analyze the effectiveness of reforms in the field of public education. At this meeting, the head of state said that it is necessary to develop the teaching of natural and exact sciences, and accordingly 193 It is planned to establish schools specializing in natural and exact sciences on the basis of the educational institution. Our state in the video selector the head said that schools should be provided with teaching and laboratory equipment, computer technology, textbooks and teaching materials. Hence general secondary education

By strengthening the material and technical base of schools, it is necessary to organize a biology room in accordance with modern requirements to provide students with practical assistance in the formation of knowledge, skills and .

Object and methods of research. Research works Surkhandarya region

It was carried out on the basis of experiments at the 13th comprehensive school in Termez. To organize a biology room during the study, it is advisable to choose the last room located

close to the corridor. Because in this room you can organize a museum of nature, exhibitions. The biology room should consist of 2 rooms: a study room, 2 laboratories and a living room.

Research results and its discussion. Based on the above experience and observations. the biology room is equipped with the required level of biology teacher. Biology when equipping the biology room, the teacher must perform the following main tasks: to provide the necessary equipment in the organization of the educational process in order to increase the effectiveness of education; lesson and the use of teaching aids in other forms of learning; use of computer control programs to identify, monitor and evaluate students' knowledge; biology class and it is necessary to provide the necessary equipment for extracurricular activities. The classroom should be around 70 m² on average. The laboratory room should be 35-40m². Biology classroom will be equipped with the necessary furniture and special equipment: Electronic board, teacher's desk and chair, demonstration table, desks and chairs for students, separate cabinets for storage of drugs and models, biology

should pay attention to the ethical and aesthetic requirements of the subject when decorating the room. If the room is decorated with portraits of evolutionary history of flora and fauna, prominent biologists will be expedient. All the equipment of the biology room is used for experiments, practical work and observations during the lesson, for the timely presentation of tables, video slides, should be adapted to the distribution and collection of materials and tools in the works. This in turn allows you to store learning tools in a specific system, quickly finding and preparing them for use in the classroom gives

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All this fosters in students a culture of organizing academic work. The laboratory room is an integral part of the biology room. It is mainly training and exhibition weapons tools, utensils, i.e. all the manuals needed to organize the learning process are stored. Audio and video cassettes, video discs, didactic materials, laboratory and practical training All instructions and guidelines are included in the system of bibliographic card indexes compiled on a specific topic. In addition, conduct experiments on the table in the laboratory room In addition, the necessary materials for experiments are prepared on the table in the laboratory, exhibitions are repaired. There will be a faucet on the table. It is used for washing dishes. The biology classroom, in addition to the laboratory room, should have a living nature corner. Only alive in a living nature corner the preservation of plants and animals is useful not only for conducting experiments on them and demonstrating them in the classroom, but also for doing extracurricular and extracurricular activities. Organize a living nature corner in the foyer near the biology room as much as possible . When arranging a special place, it should be taken into account that the storage and placement of living organisms meet biological requirements. A passport is placed in front of each plant and animal that is stored. This provides an opportunity to get acquainted, as well as make observations by measuring and recording data on experimental and control objects, living nature corner students care for plants and animals Labor cultivates a culture of work: socio-organizational skills and a caring attitude to social-school property help to form a sense of conservation and reproduction through the care of plants and animals. Biology in secondary schools The effectiveness of education depends on the

organization of the educational process in the classroom, extracurricular and extracurricular activities, excursions at the required level. The organization of these classes at the required level, first of all, the biology classroom, laboratory

depends on the complete equipping of the corners of living nature. Sunlight should shine through the windows of the biology classroom, as the colorful room flowers grown and decorated in the room increase students 'interest in nature. The room should be decorated with themed illustrations. Equipping the biology room and taking into account its enrichment throughout the year, its use One of the main tasks is to ensure that it is always ready for. Biology is a science that teaches mainly about living organisms. Teaching biology in accordance with the requirements of DTS, based on the use of visual and practical methods on living organisms requires the establishment of a material base that allows for training [1]. The biology room consists of 2 rooms: a classroom, a laboratory, a room "living corner" where the necessary equipment, tools, objects, tables are stored.

Training and laboratory rooms are organized in special rooms equipped with the necessary equipment. When the classroom is equipped, it should fully cover the content of the subject. There is a board in front of the cabinet, a TV set on the right and a computer on the left. To the left of the board on the right side of the plant or animal cell stand or model should be placed the evolution of the development of the organic universe, on the side of the mirror are the chambers, on the back are the cabinets on the departments of biology, and on these cabinets are the equipment belonging to each department. To the top of the cabinet Scientists who have

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made a significant contribution to the science of biology, including EP Karovin, IA Raykova, TZ Zohidov, AA Muzaffarov, YH Turakulov, BO Tashmuhammedov, J.A. Musaev, Portraits of A.Abdullaev and others will be exhibited [1]. Science room equipment should be housed separately in a specific system that meets the requirements of each biological science. Equipment for the experiment must be at the level of the latest scientific and technical achievements, meet the requirements of technical aesthetics, safety, occupational hygiene. Therefore, there are general requirements for the use of training equipment in training and laboratory rooms [1].

1. Pedagogical requirements:

Classrooms and laboratories, their equipment and tools to focus on the content of the subject, help students to fully understand the structure of objects, help to remember and apply knowledge, the implementation of the principle of demonstration in biological education, as well as advanced pedagogical and through the use of information technology, should help students master the basics of biological science, structure their teaching and practical skills, prepare them for independent living, and help them choose a career.

2. Safety and hygiene requirements for the biology room:

All training equipment in the room must meet the requirements of technical means of education and occupational hygiene and safety. Technical means (tools) in the classroom should be a reminder (notes) of the rules of use and storage. Full compliance with safety and hygiene requirements is a reliable guarantee for the prevention of accidents and various diseases.

3. Aesthetic requirements:

Every piece of equipment placed in the room, as well as their elements and general appearance, must meet the laws of beauty, nurture the artistic taste of students, create a sense of satisfaction in both the student and the teacher. Exhibition resources in the room:

Optical instruments are more commonly used optical instruments in biology classes, i.e. microscopes and magnifiers. They are used to study the anatomical - morphological, as well as the structure of microorganisms of animals and plants that are invisible to our eyes. The visual aids used in biology lessons are divided into natural and visual weapons. Naturally prepared weapons include: Biology - herbariums, herbarium tables and handouts prepared from dried plant and its organs for practical work;

from zoology - collections of insects and fixed representatives of invertebrate species, wet preparations showing the development of animals, tulup (chuchela) and skeletons of representatives of various systematic groups of vertebrates, distribution

material - parts of animals, bones of fish, coins, feathers of birds, etc .; from human anatomy, physiology and hygiene - the human skeleton, some bones include micropreparations and others.

Visual aids: tables and pictures for each course; human body and model and individual organ systems divided into parts for the course of human anatomy, physiology and hygiene; for a general biology course, monkey skull bones and brain models include slides and micropreparations. Tables - Particular attention should be paid to the maintenance of training schedules. It is convenient to store the tables hanging on the wire hooks in the cabinet. Biology room all

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equipment for experiments during the lesson, practical work observations, tables, videos, timely presentation of slides, distribution and collection of materials and tools in practical work should be adapted to receive. Keeping learning tools in a specific system allows you to quickly find and prepare them for use in the classroom. Proper and beautiful placement of all items in the biology room helps to cultivate aesthetic feelings in students. Equipping a living nature corner. Some necessary equipment should also be considered when organizing a living nature corner in a biology room. First of all, it is necessary to provide experiments on plants under the influence of additional light.

To do this, the corner must be provided with additional light sources. If the temperature in the living corner is low, it should have a light chamber. This should provide enough light, allow the temperature to rise or fall, and maintain that temperature. In the middle of winter, the inclusion of a light camera in the range of living corner equipment allows for a variety of experiments on a light-loving and heat-loving plant. To plants to retain moisture water is sprayed in the sprayer. A terrarium can be used for the humidity chamber. To do this, the bottom of the terrarium is filled with sand, and flower pots are placed low - high. Moisture-growing plants such as moss and others are transferred to them. In the morning a water collection pit is made or a water bath is placed. Four glasses for cuttings You can make a moisture chamber or greenhouse in the form of a glass box filled with soil or sand and glued to the corners. A dark chamber is needed for a series of experiments to grow a fungal, bacterial colony. The inside of this camera is black

color, and the outside will be the color of the room furniture. Hydrophytes are placed in

aquariums or jars. To do this, the bottom of the jar is filled with a little soil, 2 cm thick peat sand. Aquariums, terrariums, voles and cages are needed to keep a variety of animals in the wild. the school should have aquariums and clear glass jars to monitor animals living in the ponds. Terrariums are set up to store both aquatic and terrestrial reptiles, taking into account the ecology of reptiles. There should be cages of different sizes to store birds and mammals. Thus, the composition of the living nature corner and the content of the work in it is determined by the educational needs of all biological courses.

In short: This classroom carries out the process of teaching, educating and developing students. The biology room is equipped with natural flowers, birds of prey, fish in the aquarium, that is, a corner of living nature and beautiful landscapes depicting Mother Nature, which introduced students to the science of biology creates a feeling of love for nature while increasing interest. Therefore, if the biology teacher is equipped with the necessary basic and auxiliary teaching aids for the teaching process, he will achieve his goal. The biology classroom is a place where the teacher carries out pedagogical activities.

The teacher should collect additional literature necessary for independent learning of students and organize exhibitions of literature under the heading "Read is interesting".

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