

# A Modern Suite of Biology Rooms

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The dream of a high school biology teacher came true! How many of us have hoped that we would sometime have the proper space and equipment to teach a real *living* course in biology, where pupils could learn by observing and doing! Surely textbooks are a necessary aid in teaching, but I happen to be a teacher who believes that high school pupils learn faster, show more interest, and retain more when they can deal with living plants and animals in as near their natural environments as possible. I am certain that, with a classroom, conservatory, animal room, and plant preparation room, biology pupils at Brookline High are doing just that.

When it came time to build a new gymnasium, our educational leaders saw to it that space on the 3rd floor was reserved for music, activities, photography, and a suite of biology rooms. I am most fortunate to teach in a school system where administrators believe that they should consult the classroom teacher for advice as to equipment and space needed to meet the needs of pupils. I had filled the old laboratory, where I had taught in the science wing, to overflowing with plants and animals. This greatly impressed school officials, and might give you an idea for bringing your needs and aims to the attention of your own officials. At least it was not long after that I was given "the green light," and started making plans and listing equipment needed.



FIG. 1. View of classroom.

During my 24 years of teaching biology, I had visited many high school biology laboratories, gathering ideas on their best features and equipment; school authorities gave me what

I felt was needed. The photos here will help you visualize the suite of four rooms which was provided.



FIG. 2. View of classroom looking out into conservatory.

The classroom shown in Figs. 1 and 2 is 40 ft. long and 25 ft. wide. The teacher's Lab. bench, from which the pictures were taken, has a soapstone top with gas and compressed air outlets. There are six drawers and three large compartments for storage. The outstanding feature in the bench is a built-in 30-gal. aquarium beside the sink; the teacher's platform and bench are elevated 8 in. above the level of the floor so that classroom demonstrations and the showing of specimens can be clearly seen by all. The teacher's desk is to the left of the Lab. bench and on the platform. 28 pupils can sit at movable Lab. benches. The left wall, Fig. 1, has museum, filing, and storage cabinets all set into the wall. Two shelves, running the length of the room above the cabinets, are ideal for our bird collection. There is a 3-ft. wide bench along the back of the room, above which is a tack-board. There are also two large tack-boards on either side of the two-section sliding blackboard. I am a great believer in tack-boards wherever possible in the classroom. The tack-board facing the pupils is labeled, "WHAT WE ARE NOW STUDYING IN BIOLOGY." The outstanding feature of the room is the glass partition that separates the classroom and the conservatory. Here the pupils can observe plants. They are always eager to get out into the conservatory before the class period begins. I am able, from my Lab. bench, to see everything

that goes on in both the conservatory and the plant preparation room. We are experimenting with various climbing plants to cut down some of the glaring light from entering the classroom; I do not believe in pulling down shades to block this view into the conservatory.

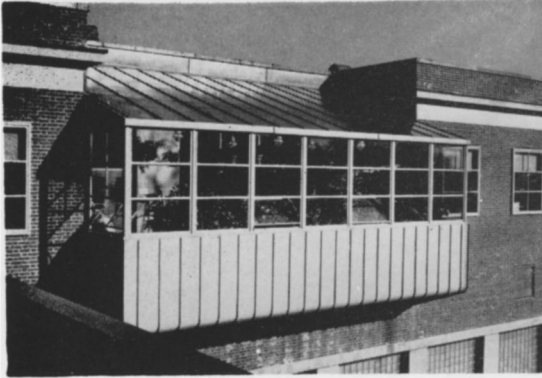


FIG. 3. Outside view of conservatory.

The conservatory, Fig. 3, overhangs 4 ft. from the side of the building. It is ventilated from the top and lower side windows. The conservatory is 30 ft. long and 14 ft. wide. Fig. 4 shows part of the interior and the entrance to the animal room. The plant benches are 3 ft. high and 3 ft. wide. There is a section reserved for plant germination and propagating work. A feature of the conservatory is the vivarium, called the "snake pit" by the

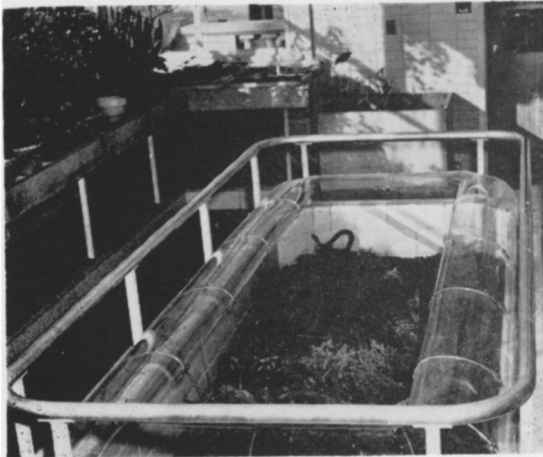


FIG. 4. Conservatory showing vivarium.

pupils. The floor graduates downward so that we are able to have sections of woodland, swamp, bog and water habitats with native turtles, frogs, salamanders, snakes, and fish to be observed and studied by pupils throughout

the school year. Many of my pupils have received their first glimpse of many of these specimens here. Our "snake pit" is a center of attraction, especially at feeding time. I am able to get a fairly large class around the vivarium at one time.

The animal room, which leads off the conservatory, is 10 ft. 8 in. long, and 9 ft. 9 in. wide. Using cages placed on top of each other, we are able to keep a good supply of animals. There are grain bins beneath the soapstone tops. The tile floor has a drain in the middle of it so that the floor and walls can be washed. There is a ventilator for constant changing of the air in the room.

On the other side of the conservatory is the plant preparation room. It is 20 ft. 7 in. long and 9 ft. 9 in. wide. There are bins for loam, leaf mold, and sand beneath the bench on the left. There are four cabinets and four drawers in the room for storage, with a blackboard at the end of the room. Here pupils get training in planting, seed germination, propagating, potting, and general care of garden and house plants. Plant life, with these facilities, is much more interesting for my pupils than it was when studied mainly from a text book.

These are the main features of our suite of biology rooms. There are, of course, many things I have omitted. As NABT meets in Boston in December, and Brookline is only about seven miles away, I hope it will be possible for many of you to visit our school. I will be glad to show you around and explain how we are equipped to *teach a living course in high school biology*.

## ANNOUNCEMENT

*Music In Nature*, a popular informal discussion of time, tone, tune, timbre, and touch in relationship to bird songs and animal sounds, and including over 50 bird songs and animal sounds, is again available on four 12-inch vinylite (non-breakable) phonograph records. Included are four calls of the California quail, songs and cries of the goldfinch, wolf, horned owl, tree toad, and meadowlark, ideally suited for all grade levels. The right to sell these excellent recordings by well-known and revered Dr. Loye Miller, Former Professor at Univ. of California, has been given to The Cooper Ornithological Club as a contribution to ornithology. The four discs, seven sides recorded, can be had for \$7.50 plus 3% sales tax in California. Order from: Cooper Ornithological Club, c/o Dept. of Zoology, Univ. of California, Los Angeles 24, Calif.