

## Landscaping as a Springtime Project

The small, country high school is an ideal setting for finding springtime projects for biology classes, with the aim of giving practical application to abstract theory. A rather unusual and successful project was completed by my advanced biology class at Perry High School in rural Ohio. The students, wishing to do something for the school while furthering their interest in biology, decided to landscape the school grounds. (As with most rural schools, landscaping received little attention when the buildings were constructed.) My responsibility as the teacher was to guide the students' efforts and to make sure the outcome was not weak or futile. Here is what we did:

The class was divided into groups assigned to planning, obtaining materials, soil-testing and appraisal of the environment, and planting. The groups worked independently. At least two periods a week were devoted to classroom discussions; the other periods were spent on the practical job of landscaping. The whole project took two months.

The first concrete action taken by the students was to find funds. Recognizing that the cost of materials and labor would be low, the school authorities approved the project and set a budget. Though small, the budget was not intended for a meager attempt; rather, it was adequate for a concentrated effort on the most-needed areas—the idea being that other areas could be landscaped in future. A local nursery supplied materials at cost and also provided advice and physical help. (The community was made aware of the nursery's assistance.) The county Agricultural Extension Service office was most cooperative, and local gardeners and enthusiasts gave advice and donated plants and fertilizer.

The planning committee worked hardest and had the most rewarding group experience. Its job was to mold all of the information from various sources into a model that could be achieved within the budget. Luckily, a few art students belonged to this group: the blueprints they made were much used.

The objectives of this project were completely achieved: an in-depth study of botany, conservation,

and ecology; and—most important—a worthwhile service to school and community. The response of the community, too, was noteworthy: a citizens' group was formed to clear off a stream bank beside the school and start a small park for the use of the elementary grades.

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## Science Students in the Library

In most high school courses the most common source of information for students is the textbook. But much of the material in that textbook is out-of-date even before the book is put on the market—especially in science. Therefore every student should be efficient in the use of the library, so as to find current and pertinent information supplementing the textbook. It is as important for science students to be aware of current trends and to know what resources are available when doing research as it is for social-studies students to keep up-to-date on current events. One of the first objectives of any science course, therefore, should be to train the student to use the library and identify current trends in specific sciences. This would be especially worthwhile for the student who is just beginning the study of science or has just entered the school.

In my 10th-grade biology classes, an average of one period a week was devoted to discussion of current events in science. Students presented articles they had found in newspapers or magazines. These weekly "news bulletins" were an outgrowth of two days of extensive library study during the first or second week of school.

The first step in planning library activities is to involve the librarian. Ask her to tell your classes about the materials that are available, including general and specific references and the *Reader's Guide to Periodic Literature*. Perhaps she can provide every student with a list of the books and magazines.

Next, give the students sample bibliographies showing forms of citation of books, magazines, newspapers, pamphlets, and encyclopedias. Discuss the importance of a well-prepared bibliography.

The next activity requires a full class-period in the library. Each student is given a worksheet and instructions. The instructions might take the form of a game, such as a treasure hunt, to generate interest. Here is a sample:

The following directions will help you find the answers to the questions listed below. Read them carefully.

1. For each question list at least two references in which the answer can be found.
2. List only the bibliographic information for each reference. Do not write out an answer to the question.
3. In answering the questions, use as many different reference materials as possible. (See library handout for listing.)
4. No encyclopedia may be used as a reference unless otherwise stated.



Botany, conservation, ecology—and service to school