

# How-To-Do-It

## Green Jeans Horticulture

Richard A. Menger

What started as an outdoor classroom project in 1975 on Baker High School's campus in Baker, Montana, has blossomed into a highly successful and popular curriculum. The course, *Green Jeans Horticulture*, was devised to accommodate students of average and below-average academic ability and provide them with practical horticultural experiences. Students learn such skills as pruning and plant propagation and leave the course ready for an above-entry level position in a horticulture establishment.

After planting more than 2,000 trees on campus that first year, a 12 by 16 greenhouse was added in 1977 with the aid of a \$3,000 federal ESEA Title IV Incentive Grant. The response was so great that we have had to expand our greenhouse to 12 by 40 and since 1979 have taught two separate classes.

Another ESEA Title IV Grant was awarded in 1979, that time for \$7,000. We added computer equipment including a color graphics system that enabled us to make floral arrangements, plan gardens and monitor the greenhouse. This grant also allowed students who normally wouldn't come into contact with computers to gain some valuable experiences.

With the aid of grants from the federal Title IV YCCIP program during

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**Richard A. Menger** teaches biology at Baker High School, Box 659, Baker, MT 59313. He has a B.A. in education from the University of Montana and a M.S.T. in the biological sciences from UM-Missoula. He has also taught horticulture at the high school and college level. A member of the Governor's Science Advisory Council and a regional director for the Montana Science Teacher's Association, Menger received the OBTA in 1986 and a NSTA Presidential Award in 1983 and 1988. He has given workshops throughout Montana on computers and biology and has received more than \$50,000 in grants from state and federal sources for education. His research interest is in applications of Hypercard computer software in combination with laser-disc players to control screen presentations for classroom use.

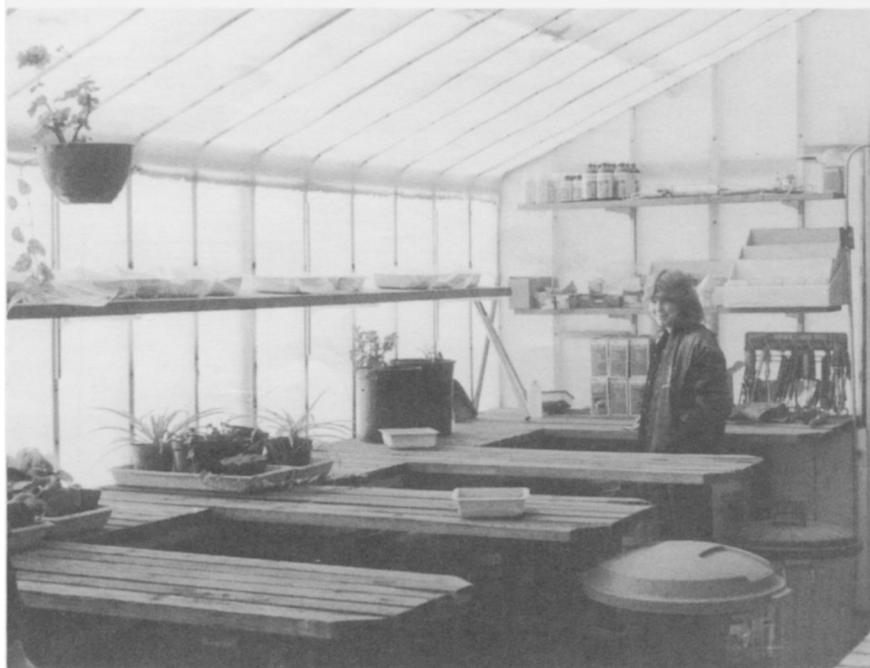
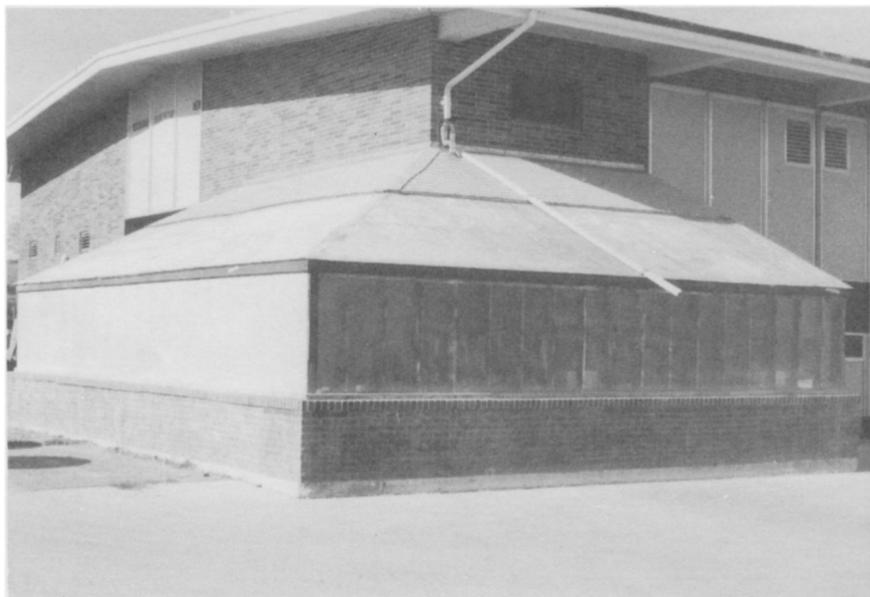


Figure 1a and 1b. The greenhouse was built entirely by students, inside and out.

1980-82 we paid students to work in the program, part-time during the school year and full-time during the summer. These grants totaled more than \$30,000 and represented an enormous boost to the program. The federal money was used to build three parks in Fallon County which are still heavily used. The money paid for student salaries, equipment and items such as picnic tables and slides.

During 1982-83, an Incentive Nutrition Education grant for \$5,300 was awarded to *Green Jeans Horticulture*. This enabled students to grow and prepare foodstuffs, learn their nutritional importance, prepare menus for food service and home use, and develop a cost analysis of such an enterprise. In cooperation with classes in a home economics course, a salad bar and tasting table were developed for sampling by hot lunch participants or by the senior citizens center.

Currently, there is a surplus of edible materials being produced by the *Green Jeans* program, resulting in some 120 pint jars of jelly from plums and apples harvested from trees in the shelterbelt, a cultured wooded area on campus. These products are given away to faculty, staff and parents in the fall. Herbs, greens, berries and even mushrooms are produced in the greenhouse or shelterbelt. These are often used in home economics classes.

Regular practical studies are given on topics such as plant propagation, soils fertilizers, pesticide use and tree pruning. After students have a working knowledge of these topics I also include maintenance and repair of garden tools, lawn care, floral arranging and landscaping. *Green Jeans* owns and operates two 7 h.p. Rototillers for soil conditioning and a tree limb shredder-chipper for mulch and



Figure 2a and 2b. The greenhouse supplies all the plant needs of elementary and secondary science classes.



Figure 3. Landscaping becomes a major undertaking in the spring. Rock gardens, a vegetable garden, frog pond and weather station, plus erosion control are some of the many projects completed.

## Biology Position Bluffton College

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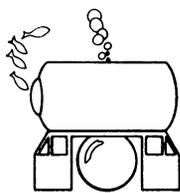
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composting projects.

In cooperation with home economics classes, this program continues to instruct students in the nutritional value of food and its relationship to human health, including mental and physical well-being.

The vocational and recreational aspects of the biological sciences are fast becoming as important in education as those programs written especially for academically talented and college-bound students.

The Biology Department at Baker High School has never lost sight of designing programs to meet the needs of all students at the secondary level. Worthwhile programs such as *Green Jeans* give each participant a sense of pride and accomplishment and demonstrate that if the right teaching techniques are used, students are willing to learn.

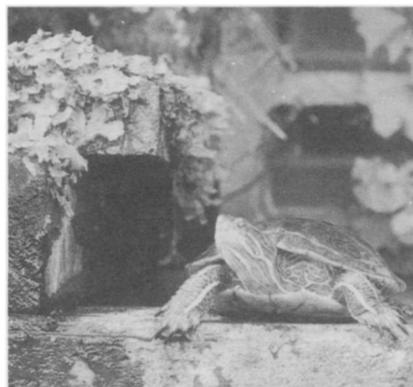


Figure 4. Turtles, frog, newts, spiders, worms and other animals also occupy our greenhouse year round. Our 1,000-gallon rainwater cistern is home to a five-pound largemouth bass.



Figure 5. A wet wall cultures the liverworts, mosses, ferns and epiphytes for classroom use.

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