

Introduction

Lopez Island is a small island community of 3,000 people, located in the Puget Sound, a 50-minute ferry ride from the mainland. Essentially, all the food and fiber consumed on the island is imported via the Washington State ferry system. The primary goal of our project is to train island residents to become more self-sufficient in food production and consumption patterns. We aim to accomplish this by designing and teaching a 4-month elective high school agricultural science class, *Principles of Ecological Food Production*. We are also collaborating with the school chef to select and prepare vegetables with the class and to serve these vegetables in the school cafeteria. The class will be taught at S&S Center for Sustaining Agriculture and Homestead Farm, located approximately 1/2 mile from the school.



Agricultural Science Class in Ecological Food Production

- Students learn the importance of local, seasonal and sustainable food production and consumption.
- Students learn about the impact of their food choices on their own health, their community and their environment.
- Students learn about agricultural science in higher education and as a career opportunity.



School Cafeteria Component

- Students grow winter greens to improve the nutritional quality of the school lunch program.
- Students prepare and serve vegetables in the school cafeteria.
- Students carry out surveys to evaluate consumers' response to eating local and seasonal foods.

Objectives

- 1) Teach students how to produce nutritious vegetables year round using low-cost production techniques that are environmentally friendly.
- 2) Develop school menus with the school chef to utilize island-produced food year round, teach the students how to prepare such foods and generally improve the nutritional quality of the school lunch program.
- 3) Give high school students an opportunity to learn in a hands-on fashion agricultural science for credit.



Hoop House Construction

- Students learn about using solar energy in a growing space that protects plants from harsh winter weather.
- Students create soil fertility and plant health through composting.
- Students apply solar-driven micro-irrigation using rain water.



Experimental Crops

- Students grow varieties of dry beans to test suitability for local soils and climate.
- Students participate in growing winter wheat and barley using low-tech inputs.

Curriculum

Students will have the option of taking the class pass-fail or for A-level credit. Students who opt for pass-fail will earn credits through hands-on work such as hoop-house construction, vegetable planting, maintenance and harvesting and kitchen vegetable preparation. Students who take the class for A-level credit will work on a research project on the farm or in the kitchen using the vegetables they produce. We have designed a curriculum that includes a field and a cafeteria component. In the field, students will grow crops and construct facilities.



Fence Construction

- Students build low-cost fencing to control animal predation.
- Students learn about solar collectors to energize fencing.



Community Outreach and Publication

- Students publish their work through school bulletin boards, posters, articles in local press, WSU newsletters, websites and journals.
- Students incorporate experiment data in senior theses.
- Students may present their projects at the Washington Junior Science Symposium.