

The Rain Garden Project: Place-Based Education, Service Learning, and Scientific Literacy

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ABSTRACT

Hands-on, place-based learning in conjunction with service learning can be used to engage non-science majors in introductory science courses. The combination of service learning and place-based teaching methods can provide a framework for an appreciation of the usefulness of scientific literacy. Non-science majors enrolled in an introductory environmental science class on the Winter Haven, Florida, campus of Polk State College participated in a semester-long, experiential service-learning project that focused on local water resource issues. The campus is on a recharge area for the Floridan Aquifer. The sustainability of the aquifer has received recent publicity and the availability of freshwater resources is relevant to the students' quality of life. The City of Winter Haven's Water Resource Management Plan calls for the use of rain gardens to capture runoff and increase rainwater infiltration into the Floridan Aquifer.

Students enrolled in the Introduction to Environmental course worked in small groups with Winter Haven Resource Management staff to design and build rain gardens on campus. The rain garden project gave students opportunities to apply classroom concepts and prior knowledge as well as to build knowledge through conversations centered upon local water resource issues. The exchange of ideas within the framework of the project's personal relevance created an awareness of the usefulness of scientific literacy and the role scientific literacy can play in solving problem. Service learning gave students an opportunity to reflect upon their civic responsibility and the role of scientific literacy in civic planning.