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## THE PROFESSIONAL RESIDENCY IN NATURAL RESOURCES AND ENVIRONMENTAL EDUCATION

### Using Non-Traditional Methods to Complement Effective Natural Resource Education

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**ABSTRACT:** Since 1967, Teton Science School (TSS) has been an important resource in educating, training, and inspiring students of all ages. The school enjoys a reputation as the premier natural science education center in the northern Rocky Mountain region.

Founded by Ted and Joan Major, the school is situated within the Greater Yellowstone Ecosystem on the eastern edge of Grand Teton National Park. The school's location, surrounded by the aspen and conifer forests of the Gros Ventre Mountain foothills, is ideal for natural science studies.

Originally a guest ranch, the school's log buildings include over twenty cabins and a main lodge. The school has grown to include two dormitories, a log dining lodge, a graduate student commons, a natural history museum, and a field sciences laboratory. The school is equipped with many computers as well as fax, modem, and Internet connections.

The school's field studies curriculum has always been comprehensive and progressive. Responding to the growing needs of the education community for a higher standard in natural science instruction, the school has recently pioneered the development of a unique academic residency for college graduates interested in careers in the development, teaching, or management of private and public natural resource and environmental education programs.

The TSS Professional Residency for Natural Science and Environmental Education (PREE) is a one-year experiential academic program for college graduates. The goal of the Residency is to offer students comprehensive, high quality training, using a unique combination of academic work and extensive hands-on, teaching opportunities.

PREE offers post-baccalaureate students extensive training in field-based, natural science education as part of graduate studies at participating universities. The Professional Residency began as a unique partnership with Utah State University, Department of Forest Resources. Students that are accepted into both the Teton Science School Professional Residency and Utah State University, spend one year at TSS completing a very concentrated practicum in natural resource and environmental education that includes extensive teacher training as well as academic support work taught by USU adjunct faculty at TSS. These students then finish their graduate education under the tutelage of USU faculty at the university.

While the program's course work offers an opportunity to examine environmental education issues in an academic context, direct teaching opportunities provide students with invaluable hands-on experience. Students play a significant daily role in planning, organizing and teaching the many elementary and secondary students who attend TSS annually. To balance course work and fieldwork, students are provided with one-on-one guidance with a TSS faculty member.

Other colleges and universities are now active participants in the PREE program. In order to complete their graduate degree in natural resource management or environmental education, graduates of the PREE program enter programs at associated universities either prior to or at the completion of the PREE program: Utah State University, Prescott College, Colorado State University, University of Montana or University of Wyoming.

The important elements of the Professional Residency model that are embedded in the educational philosophy of Teton Science School are useful themes for natural resource professionals. This approach to graduate education offers essential skills and knowledge that match closely the skills and knowledge base that resource professionals find to be essential in the world of public participation and natural resource conflict. Some examples:

\*Graduate residents develop extensive natural history knowledge and critical naturalist skills. The graduate students that come to TSS arrive with exceptional undergraduate backgrounds in the sciences, yet they have very little practical, field experience and direct knowledge of nature. At TSS, their theoretical knowledge is grounded in real world experience in nature which promotes their effectiveness as communicators and teachers. The curriculum of the PREE program has as a fundamental focus the notion that the essential character of any kind of environmental or natural resource education is helping students find a “sense of place” in their natural and human community.

\*Graduate residents learn natural resource conflict management skills, including effective communication, negotiation and mediation. Often graduate students that spend a year at Teton Science School arrive with academic training in resource and environmental policy and management, but have had little real life experience working with and through conflict. Their communication skills are primitive and their understanding of the nature of conflict is underdeveloped. We help to improve these skills by exposing them to regional conflict and asking them to teach these skills to visiting students. In addition, each student participates in three intensive seminars in which they explore their personal and professional communication skills, their ability to work through conflict and their awareness of the essential elements of a professional life.

\*Graduate residents use long-term, TSS field research projects as educational opportunities with students that visit TSS. Although many graduate students come with some research experience, the opportunity to teach the research process to students as well as to help them collect and analyze data, deepens their appreciation for and understanding of the nature of science. They become communicators of good science and effective management rather than merely technicians.

Offering direct exposure to these sorts of skills and experiences is difficult in more traditional university settings. The Professional Residency, because of its experiential and real-world setting, presents an interesting and effective complement to more typical natural resource education.