



Citizens Advisory Board  
Idaho National Engineering and Environmental Laboratory

**CURRICULA DEVELOPMENT AND CONTINUING  
EDUCATION OPPORTUNITIES  
FOR ELEMENTARY AND SECONDARY SCHOOL  
TEACHERS IN IDAHO**

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**RECOMMENDATION**

The Board recommends DOE:

- Continue its support of the existing education efforts described below as they provide opportunities for teachers and students to better understand nuclear energy and they promote interest in scientific research. The Board also realizes some of the complex environmental issues facing Idahoans (such as management and disposal of nuclear waste and transportation of hazardous and nuclear materials) are potential topics for additional educational curricula.
- Sponsor development of additional curricula. The program should reflect the most current research, provide several perspectives, and include information on treatment, interim storage, long-term storage, and transportation of nuclear waste. The curricula should encourage development of scientific inquiry skills through an issue investigation approach model.
- Facilitate development of additional continuing education opportunities for elementary and secondary teachers around the state. These opportunities should be coordinated with Idaho colleges and universities, and should allow participants to earn continuing education units or academic credit for completion. The Board believes the curricula referenced below and these courses should be integrated and designed to assist teachers in instructing students to learn how to think, not what to think.
- Increase availability of site technical personnel to visit classrooms around the state at teachers' requests. This would be a reestablishment of a former successful program using a toll-free telephone line.

**BACKGROUND INFORMATION**

The Citizens Advisory Board to the Idaho National Engineering and Environmental Laboratory discussed the role DOE plays in the development of a curriculum for continuing education opportunities for elementary and secondary school teachers in Idaho during its March 18-19, 1997 meeting. The INEEL CAB's Education Committee subsequently met and discussed various teacher and student education opportunities.

The following describes resources identified by the Committee for teachers:

- The Idaho Chapter of the American Nuclear Society, Idaho State University and the

Department of Energy sponsor a two-day continuing education course entitled “Teaching Nuclear Topics.” The course includes discussion of basic terms and definitions, radiation, nuclear power plants, handling and disposal of nuclear waste, and transportation of hazardous and nuclear materials. It is designed to educate teachers on the terminology and principles of nuclear topics. This course also presents an overview of national concerns concerning nuclear waste. Continuing education units and/or academic credit are available to participants in the course.

- Other education programs at the INEEL include an internship for high school teachers to work with the scientists and engineers in various technical areas. The intern program is designed to promote understanding and interest in scientific studies and to develop scientific inquiry skills.

The following resources are available for use by teachers to use in teaching students about radiation and related topics.

- A 1997 publication entitled “The ‘Rad’ Experience - A Guide to Understanding Radiation and Radiological Issues.” This two-week curriculum is designed to introduce students to the scientific fundamentals of radiation. It contains sections on the basics of radiation, the benefits and risks of radiation (covering health and societal benefits associated with radiation technology), and a format for a “Radiological Issues Debate” (allowing discussion of controversial nuclear issues, such as storage of high level waste and operations of nuclear reactors to produce power).
- The “Energy Education Workshop Curriculum” includes a curriculum for primary, intermediate, junior and senior high students. The curriculum was developed by the Illinois Office of Education and covers all aspects of energy production. Each section covers one source of energy and includes discussion of the environmental implications, such as the impacts of building hydroelectric dams and coal-fired power plants, and the generation of nuclear waste from nuclear power production.
- The “Rad Trailer” is a trailer equipped with exhibits designed to educate the public about radiation. It can be used in the community setting or in schools. It also addresses safety concerns associated with shipping spent nuclear fuel.

The committee determined that the above curricula and programs offer an excellent overview of the fundamental concepts associated with radiation, and that they provide additional information about nuclear power as an energy source. However, the committee also agreed that little information relating to current nuclear waste topics and related environmental concerns was available.