

The Stewardship Education Resource Kit was developed by the Oak Ridge Site Specific Advisory Board (ORSSAB), Oak Ridge, Tennessee, to:

- Provide classroom material on the background, science, history, and cleanup of radiological and chemical contamination
- Define and explain stewardship plans and activities
- Emphasize the need for public involvement

The kit contains lesson plans, videos, a fictional case study based on actual cleanup operations, an appendix of supporting materials, and a video CD on the background and use of the kit.

PROJECT BACKGROUND

Imagine that it's the year 2150. The community leaders and elected officials of Oak Ridge are keenly aware of the importance the city played in winning a long-ago world war they learned about in school. And they have an understanding of the role Department of Energy (DOE) facilities played in national defense and energy research. Many of the old DOE facilities are gone, and Oak Ridge is a much different place than it was when the facilities were in use.

These leaders have big plans for Oak Ridge that involve using much of the Oak Ridge Reservation, as it was known before DOE was abolished in the year 2079. But do they know what secrets the land still holds? Do they know what was left behind that could affect the health and safety of the community? Even if they know what was left, do they know where it is?

These are the kinds of questions another group of individuals asked themselves in the early years of the 21st century. They knew the Oak Ridge Reservation might not exist someday, and they understood the importance of making sure future generations know what went on there and what was left behind. Such questions asked by members of ORSSAB led to the creation of the Stewardship Education Resource Kit.

ORSSAB is one of nine Site Specific Advisory Boards chartered under the Federal Advisory Committee Act to provide recommendations and advice to DOE's Environmental Management Program. ORSSAB was established in 1995 and is composed of 20 members who are appointed by DOE to serve on a voluntary basis.

The need for the kit is also tied to the history of the Oak Ridge Reservation and the role it played in the development of nuclear weapons during World War II. As part of the legacy of this program, extensive radiological and chemical contamination of the reservation occurred over several decades.

DOE's mission for large parts of the reservation has now shifted to environmental cleanup. However, because of the extensive



The Oak Ridge Site Specific Advisory Board

contamination and acreage involved, much of the radioactive waste will be managed on site and will remain a potential health and environmental hazard for thousands of years. The kit was put together to help address concerns about this contamination.

KIT DETAILS

The Stewardship Education Resource Kit is exceptional because it offers teachers a complete resource for educating students about long-term stewardship of contaminated land.

The kit provides a lot of flexibility for teachers to tailor the lessons to a number of grade levels and specific subject areas, such as environmental science, chemistry, biology, ecology, civics, or history. Lesson plans can be easily adapted to reduce or expand the amount of material presented, depending on the class time allotted to this subject and the length of the classroom period within a specific school.

The lesson plans are the backbone of the kit. The lecture notes within the plans allow teachers to be familiar with the material before presenting it. PowerPoint slides are provided with each lesson, including instructions on how and when to use them. The PowerPoint instructor notes provide the details for presentation of the slides.

The last lesson plan focuses on a fictional case study, which is based on actual contaminated areas on the Oak Ridge

Reservation. The case study allows students to role play different interest groups and discuss the critical issues related to contamination that remains on site for hundreds or even thousands of years.

The location and extent of contaminated areas can be identified on the [map of the Oak Ridge Reservation](#). It can also be used to point out the location of the Oak Ridge Reservation relative to students' homes and their high school.

The [acronym list](#) is helpful to students in decoding government documents where there's heavy reliance on acronyms.



[Historical photographs](#) are provided to visually reinforce the presentation of stewardship issues to the class.

A [glossary](#) is included in the kit to identify all the vocabulary words used in each lesson plan plus many other long-term stewardship and environmental terms.

Two [videos](#) are featured in the kit. The first video, "The White Hole," addresses waste treatment and disposal in an abstract way. It's an animated film that establishes a thoughtful atmosphere for class discussion. The second video, "The Manhattan Project," is a factual account of the early nuclear development years and provides an excellent historical background for the contamination that occurred on the Oak Ridge Reservation. The kit provides a worksheet for each video to keep students focused during classroom presentation of the films.



[Reference documents](#) are provided to allow the teacher and advanced students to do more in-depth study and analysis of stewardship issues. Some of the

documents provide information on the current environmental condition of the Oak Ridge Reservation and progress made in cleaning it up. Others track stewardship efforts across the DOE complex and on the Oak Ridge Reservation.

Students are given the opportunity to reinforce what they've learned with [worksheets and word puzzles](#). As the students work through these handouts they'll rely on vocabulary and concepts introduced in the classroom.

FUTURE GOALS

ORSSAB is currently working with school systems in the area and with the University of Tennessee to develop workshops for teachers on how to use the kit. The board also will review the kit periodically and provide updates and supplemental information as necessary to make the kit a truly dynamic teaching tool.

FOR MORE INFORMATION

To learn more about the Stewardship Education Resource Kit, contact the ORSSAB office at (865) 576-1590 or 1-800-382-6938. For more information about ORSSAB, see our web site at www.oakridge.doe.gov/em/ssab.



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