It's not just dirt!

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Soil is the linchpin of the environment, where atmosphere, biosphere, and hydrosphere meet. Despite that, many students see soil as "just dirt" - a place to grow plants, but nothing more. Soil science educators are challenged with the task of helping students and the public recognize the critical importance of soil in the environment.

A collaborative project by soil science and earth science teachers at University of Nebraska-Lincoln, Oregon State University-Cascades, Colorado State University-Fort Collins, Trinity College, and University of Minnesota explored the development and dissemination of soil e-lessons. By harnessing technology, the instructors created learning tools that could reach beyond their classroom walls to teach other students and public audiences about soils as well.

The project, which is featured in the 2009 edition of the *Journal of Natural Resources and Life Sciences Education* (JNRLSE), aimed to develop and promote the use of online lessons to educate college students and the public about role of soil in addressing food, energy, and environmental issues. To engage learners, the developers focused on the inclusion of active learning strategies, interactive Flash animations, experiential learning activities, transfer problems, embedded questions, images, and text as primary instructional elements. All activities were contained in a web-based format to make them easy to use and share. Development of the e-lessons was supported by a National Science Foundation Course, Curriculum, and Laboratory Improvement Program Award.

The University of Nebraska-Lincoln's "Plant and Soil Sciences eLibrary" showcases lessons developed for the program. It features activities on topics such as rocks and minerals, weathering processes, soil forming factors, processes of soil profile development, and soil taxonomy and geography. The lessons cover the fundamentals of why soils are what they are, and how they came to be that way. Developers believe these basic lessons will spark further interest in soil, and help learners recognize soil as an essential part of the environment.

More information: The e-lessons can be readily accessed through the University of Nebraska's Plant and Soil Sciences eLibrary, under the section entitled "Soil Genesis and Development" at: http://plantandsoil.unl.edu/croptechnology2005/soil_sci/

The full article is available for no charge for 30 days following the date of this summary. View the abstract at www.jnrlse.org/view/2009/web-lessons-2009.pdf .

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