

Note to Educators

The mission of the Forest Service is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. For more than 100 years, our motto has been caring for the land and serving people. We recognize our responsibility to be engaged in efforts to connect youth to nature and to promote the development of science-based conservation education programs and materials nationwide. We have developed the *Natural Inquirer* Climate Change Education Collection to help you and your students better understand climate change.

Forest Service researchers have studied the impacts of climate change and air pollutants on forests and grasslands for more than 30 years. This research has identified climate change trends and subsequent effects to ecosystems across the United States and worldwide. For their research contributions to the Intergovernmental Panel on Climate Change (IPCC) Report, 13 Forest Service scientists were recipients of the Nobel Peace Prize in 2007. The Nobel Committee recognized "efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change."

The articles in the Climate Change Education Collection will introduce students to several of these scientists and their climate-change-related research. Students will learn about the scientific process used by the scientists and will be engaged in hands-on activities on climate change topics such as the carbon cycle, invasive species, vegetation changes, and urban and world forests.

As teachers of science, you want your students to acquire abilities that will enable them

to conduct scientific inquiry, and you want them to gain an understanding of the scientific inquiry process. Scientific inquiry can best be taught by integrating minds-on and hands-on experiences. Over time, such experiences encourage students to independently formulate and seek answers to questions about the world we live in. As educators, you are constantly faced with engaging your students in scientific inquiry in new and different ways. In an age of abundant technology, standard teaching strategies can become monotonous to today's learners. The *Natural Inquirer* provides a fresh approach to science and a view of the outside world that is larger than the classroom and can still be used while in the school setting.

The *Natural Inquirer* is a science education resource journal to be used with learners from Grade 5 and up. The *Natural Inquirer* contains articles describing environmental and natural resource research conducted by the Forest Service, U.S. Department of Agriculture scientists and their cooperators. These are scientific journal articles that have been reformatted to meet the needs of middle school students. The articles are easy to understand, aesthetically pleasing to the eye, contain glossaries, and include hands-on activities. The goal of the *Natural Inquirer* is to stimulate critical reading and thinking about scientific inquiry and investigation while learning about ecology, the natural environment, and natural resources.

The Format of a *Natural Inquirer* Article: Each *Natural Inquirer* article follows the same format. *Natural Inquirer* articles are written directly from a published science article, and all have been reviewed by the scientists for accuracy. Each article contains the following

sections, which you may introduce to your students as they read:

Meet the Scientists: Introduces students to the scientists who did the research. This section may be used in a discussion of careers in science.

Glossary: Introduces possibly new scientific or other terms to students. The first occurrence of a glossary word is italicized in the text.

Thinking About Science: Introduces something new about the scientific process, such as a scientific habit of mind or procedures used in scientific studies.

Thinking About the Environment: Introduces the environmental topic being addressed in the research.

Introduction: Introduces the problem or question being addressed by the research.

Method: Describes the method used by the scientists to collect and analyze their data.

Findings: Describes the results of the analysis.

Discussion: Discusses the findings and places them into the context of the original problem or question.

Citation: Gives the original article citation.

FACTivity: Reinforces an aspect of the research through a hands-on activity.

Science Education Standards and Evaluations: In the back of the monograph, you will find a list that allows you to identify articles by the National Science Education Standards they address. You and your students may also complete evaluation forms online by visiting <http://www.naturalinquirer.org>. If you have any questions or comments, please contact:

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in the subject line)

Educator Resources:

From the Web site, you can read and download lesson plans, word games, and other resources to help you use the *Natural Inquirer* in your classroom. You can also view and download a year-long lesson plan aimed at helping your students learn about the scientific process.

Visit the *Natural Inquirer* Web site at
<http://www.naturalinquirer.org>.

For more climate change information,
visit: <http://www.fs.fed.us/climatechange/>

