

# Citizen Scientists and Decision Making – A Case Study IODP Expedition 312 What Lies Beneath the Upper Crust?

## Background

From websites and newspapers to Internet searches, the evening news, and popular magazines, “Citizen Scientists,” often receive and have to decipher scientific information directly from the media. But sometimes it’s a confusing process. How can you, as a “Citizen Scientist,” determine whether information about science is reliable and, more importantly, what it means in the context of your life and personal decision-making processes?

Like many research organizations, the Integrated Ocean Drilling Program (IODP) sends press or news releases about scientific discoveries to reputable publications, radio, and television media that you may eventually read, hear, or see through a story written by a reporter. How can you get more information and how can you check the story for accuracy? Try the simple steps below.

## Learning Objectives

Students will be able to:

- Determine whether or not information about science is reliable.
- Describe the kinds of questions they should ask to discover the accuracy of science news articles.

## National Science Education Standards

Content Standard A: Abilities necessary to do scientific inquiry

**Target Age:** Grades 5-8 and 9-12

**Time:** One class period

## What To Do

1. A research organization like IODP should be listed or mentioned in the report. If not, look for photo credits. Conduct an Internet search

for the organization and find their list of press releases. The press release may be difficult to read, but other reference materials may be provided that can help you interpret the story. For example, see the *Scientific American* article, “Drilled Core Exposes Hitherto Unseen Layers of Earth’s Crust,” available at <http://www.scientificamerican.com/article.cfm?id=drilled-core-exposes-hith&ref=sciam>. Was IODP listed? Conduct your Internet search and see if you can find the press release.

2. If the organization that sponsored the research isn’t listed, how about searching for a scientist mentioned in the report? Who is listed in the *Scientific American* article? Where does he/she work? What will you find by conducting an Internet search for this scientist and his/her university?
3. What is the subject of the article? What did the scientists do that they’ve never done before? Answer this question and use it to search the Internet. How many references did you find? Does this help to verify the story?
4. Finally, if you’ve located a website for the organization that sponsored the research, in this case IODP, look for an education page that might offer videos, photos, slides, and a whole variety of interpretive materials that may improve your understanding of the science in question.

See <http://www.oceanleadership.org/education/deep-earth-academy/> for videos, slides, fact sheets, and activities about the science of ocean drilling!