Teaching the Public about Science

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Teaching the Public about Science

For years the National Science Foundation (NSF) has recognized the importance of communicating research findings to the public. Thus, NSF requires grant applicants to consider how they will communicate their findings to the public and to educators. Although many grant applicants have been frustrated by this requirement, the political and ethical debates about the regulation of research and the development of science-based public policy have helped scientists recognize the importance of education and outreach.

The need for better public education about the nature of science has grown with the resurgence of creationism, particularly in the form of intelligent design. As aggressive advocacy for intelligent design/creationism has spread across the country, scientists and educators from all disciplines have publicly defended evolution education, because assaults on evolution are attacks on science in general.

Although the December 2005 federal court decision in the intelligent design case *Kitzmiller et al. v. Dover Area School Board* sent a strong message—intelligent design is creationism, not science—the decision is binding only in the middle district of Pennsylvania. Thus, individuals dedicated to providing students with a quality education must remain engaged in the science education debates brewing in their communities. Regardless of the *Kitzmiller* decision, the scientific community must fully expect that advocates for creationism will continue to surface around the country. After all, politically motivated and well-funded institutions, such as the Seattle-based Discovery Institute, that have yet to achieve their objective—a new kind of "science" that accepts supernatural explanations—are still actively pushing intelligent design, and presumably whatever intelligent design will evolve into.

High-profile attacks on evolution education, such as those in Georgia, Kansas, Ohio, and Pennsylvania, have rallied scientists. All too often, these attempts to redefine science have resulted from a perception among political activists that the science and education communities lack the organization and sophistication to fend off their efforts. Moreover, these political attacks have been made possible by the inadequate public understanding of what does and does not constitute science. Thus, the political interests behind the intelligent design/creationism movement have been able to prompt the formation of coalitions of activists.

Introductory biology courses are an excellent forum for university faculty to improve the understanding of science among future teachers, scientists, and college graduates. However, only a fraction of the public attends college, and only a fraction of these individuals take a biology course. Thus, biologists must continue to participate in myriad informal science education initiatives that reach the general public. Museums and other science centers provide excellent means to reach the public, yet those who visit these institutions are often not the individuals in greatest need of an improved understanding of science. Other means to reach the public must be pursued.

If the integrity of science and, indeed, future public support for research funding are to be maintained, scientists must continue to find effective ways to demonstrate the importance of science to every citizen.

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