



Scientific Integrity

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resources

The Evolution Debate

The rising numbers of reports regarding opposition to the teaching of evolution has led many UCS members and other concerned scientists and citizens to ask how to address this problem. While UCS is not currently working on this issue, the [National Center for Science Education](#) has a wealth of accessible resources available.



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In addition, National Academy of Sciences President Bruce Alberts sent a letter on March 4, 2005, to all National Academy members that may be of interest to those who are following this debate:

Evolution Controversy in Our Schools

Dear Colleagues:

I write to alert you to efforts by the National Academies to confront the increasing challenges to the teaching of evolution in public schools; your help may be needed in your state soon.

On February 7, 2005, Michael Behe, a founder and leading proponent of the Intelligent Design (ID) movement, published a long Op-Ed in the New York Times in response to an editorial that the Times had released the previous week. In that letter, Dr. Behe claimed that some words I wrote support his view that scientific explanations for the evolution of life on the Earth need to be modified to insert the work of an "intelligent designer".

In my response to the Times (see <http://www.nas.edu/nas/feb05times-evolution>), I pointed out that, while my words are reflected correctly in Behe's column, he completely misrepresents the intent of my statement. This is a common tactic among those who are attempting to introduce religious views of the origins of life into the public schools—or who are trying to undermine the teaching of evolution because of purported "weaknesses" in the theory.

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I write to you now because of a growing threat to the teaching of science through the inclusion of non-scientifically based "alternatives" in science courses throughout the country. A recent article in the Washington Post pointed out that there are challenges to the teaching of evolution in 40 states or local school districts around the country today (for more details, visit the website of the National Center for Science Education, <http://ncseweb.org>). Major newspapers, magazines, and other media (e.g., Time, Newsweek, MSNBC, National Geographic) have featured major stories about the controversy during the past six months.

Recent tactics to cast doubt on the veracity or robustness of the theory of evolution have included placing disclaimer stickers in the front of high school biology textbooks (Cobb County, GA and Alabama; proposal before the Missouri House of Representatives), mandating or recommending the inclusion of Intelligent Design in high school biology courses (e.g., Dover, PA; Cecil County, MD, respectively); development of statewide lesson plans that encourage students to examine "weaknesses" in the theory of evolution (Ohio); and plans to revisit parts of state science standards that focus on evolution (Kansas State Board of Education). If these challenges have not yet reached where you live or work, they are likely to do so in time.

A federal judge recently ruled the Cobb County stickers to be unconstitutional and has ordered them removed from all textbooks; an appeal is pending. The courts will soon hear a lawsuit brought by the ACLU on behalf of parents in Dover County, PA about whether ID also is tantamount to promoting religion (for additional information about the various forms of "scientific creationism" and ID, see <http://www.ncseweb.org/article.asp?category=8>). However, these challenges continue unabated across our nation, and the New York Times and Education Week report that even where the controversy is not overt, teachers are quietly being urged to avoid teaching about evolution—or have decided not to do so because it engenders so much rancor from a subgroup of students, parents, and members of the school board or local community. As a result, one of the foundations of modern science is being neglected or banished outright from science classrooms in many parts of the United States.

If your discipline is not the life sciences, you may be wondering why I have chosen to write to all members of the National Academy of Sciences. Although the controversy focuses primarily on biology, some who challenge the teaching of evolution in our nation's schools have also focused their sights on the earth and physical sciences. For example, when the Kansas Board of Education first removed portions of biological evolution from their science standards in 1998, they also eliminated statements mandating that Kansas students learn about the Big Bang, that there is overwhelming evidence that the earth is much older than 10,000 years, and the theory of

plate tectonics. All of these items were returned to the Kansas standards following extensive pressure from many organizations, including a joint letter signed by me and the Presidents of AAAS and the National Science Teachers Association (see <http://www4.nationalacademies.org/news.nsf/isbn/s09231999?OpenDocument>) and the removal of several Board members during a subsequent election. But, as noted earlier, the Kansas Board of Education plans to re-examine their science standards because the 2004 election has again resulted in a majority who favor the inclusion of "alternatives to evolution" in the state's science curriculum.

The National Academies have been involved for many years in helping scientific colleagues, teachers, and concerned citizens in individual states and school districts respond. While these challenges have national implications for science and science education, they are typically viewed as local issues, and "meddling" from organizations in Washington, DC is often viewed with skepticism. As a result, when asked to assist, I have contacted NAS members who live in the state where a specific challenge is presented, enlisting their assistance through the writing of op-ed pieces, speaking at school board meetings and related activities. The NAS also has published three reports, two of which are specifically directed to science teachers to help them understand both evolutionary theory and the social controversies that surround its teaching. Descriptions of these reports and our efforts to confront challenges to the teaching of evolution are summarized in a recent article published in Cell Biology Education (see <http://cellbioed.org/articles/vol3no2/article.cfm?articleID=98>).

We stand ready to help others in addressing the increasingly strident attempts to limit the teaching of evolution or to introduce non-scientific "alternatives" into science courses and curricula. If this controversy arrives at your doorstep, I hope that you will both alert us to the specific issues in your state or school district and be willing to use your position and prestige as a member of the NAS in helping us to work locally.

I have asked Dr. Jay Labov, Senior Advisor for Education and Communications in the NRC and a former professor of biology, to oversee the Academies' efforts in this realm. Please address all of your comments, ideas, and requests for assistance directly to him (jlabor@nas.edu; Telephone: 202-334-1458).

Thank you very much. We look forward to hearing from you.

With best regards,

Bruce Alberts
President
National Academy of Sciences

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