

Voices from the Field

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Educate misinformed citizens

Last year the *New York Times* ran a front-page story showing that people were looking for equal time for evolution in the classroom. Most were of the opinion that evolution was a valid theory, but considered creation a theory as well. The general population clearly cannot identify a valid scientific theory or the qualifications necessary to make one.



Frank LaBanca, center, is pictured with students Scott Ackerman, left, and Brian Thurm at the University of New England, Biddeford, Maine, participating in a Harbor Seal Census Program organized by the Maritime Aquarium, Norwalk, Conn.

I really feel that I am at an extreme advantage teaching in the Northeast/New England. People tend to be very moderate in their political and religious views. I have received no pressure to deal with creationism from students, parents, or community members. There seems to be a good recognition of what belongs in a science classroom and what does not should be left up to the professional scientist to decide. My advanced students, to my own surprise, viewed the [original] Kansas decision as a step backwards and felt that those board members disserved the students. This discussion was not prompted by me, and I really did not provide any input. I was quite curious to see where the students would take the discussion, and was most impressed with their academic maturity.

A student in my college preparatory class did bring up religion but understood that I would not discuss these ideas in a science classroom. The student accepted my reasoning and was satisfied.

We as biology teachers have a hard job ahead of us. We must inform and educate misinformed citizens. Often, this is not our students but their parents. I would be curious to know if an "anti-evolutionist" could even identify the scientific evidence that the theory is based on (e.g., the fossil record). Or do they know any of the key players and their contributions besides Darwin (e.g., Gould, Margulis, Miller,

etc.)? If our students could answer the question, "What evidence is there that evolution has occurred?" and they support their answers with scientific fact, we will help to properly educate a new generation and turn the taboo of evolution into a clearer understanding of the nature of science.

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Use education as tool

The most success that we have had in dealing with the evolution issue is to be proactive by using education as our tool. We now include a unit in all of our biology courses which we call "The Nature of Science." We spend time evaluating what can be called "scientific" and what falls out of the realm of science. Different biology classes get different activities which reinforce these concepts and after students clearly understand the ways that science differs with other areas of knowledge, it seems to dissipate their anxiety. Throughout the biology curriculum we refer to these activities, such as the use of indirect observation, to show students how what we learn in science has followed the criteria of science. Once students clearly understand how science looks at the world, we also look at other areas which claim to be scientific and evaluate their validity. Students actually become good at this and look at information with healthy skepticism.



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