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Texas case threatens education and competitiveness nationally

By Peter Agre and Alan I. Leshner - Special to the Express-News

The Texas economy, second within the United States only to California based on gross state product, plays a major role in driving financial trends nationwide. Similarly, decisions about K-12 science education in Texas — a huge market for textbooks — disproportionately affect the quality of science resources available to students in other states. Publishers can't afford to reprint textbooks on a state-by-state basis.

Parents everywhere should thus be concerned to learn that some members of the Texas State Board of Education are pushing to undermine the teaching of evolution. The 15-member board, including seven proponents of weakening science education standards and at least one possible swing voter, will convene March 25-27.

If the group votes to cast doubt on evolution instruction, their decision could potentially damage science education elsewhere. Among scientists, evolution is widely accepted as a well-supported explanation of how life developed on Earth through natural selection. This is certainly a cornerstone of modern biology.

Compromising science education is an alarming prospect as U.S. unemployment continues to rise in the United States. The Federal Reserve Bank of Dallas predicts that, in Texas alone, nearly 300,000 people could lose their jobs in 2009. Every year, more and more jobs require at least some familiarity with science and technology. What will be the job prospects for children who get a distorted view of core science concepts like evolution?

Texas Board of Education Chair Don McLeroy has said he believes strictly in the biblical interpretation that God created the Earth and all its inhabitants, virtually simultaneously, between 6,000 and 10,000 years ago. Science tells us that Earth's first single-celled organisms emerged about 3.5 billion years ago and only gradually evolved into a dizzying array of species. Those who literally interpret Genesis want science students to discuss alleged "weaknesses" in our understanding of evolution, yet scientists see no such problems.

In January, the Texas board narrowly squashed an anti-evolution effort. But amendments also were set forth to wedge disclaimers into the standards.

At issue, for example, is whether Texas students would need to evaluate "the sufficiency or insufficiency of common ancestry" as an explanation for the "sudden appearance" of life forms within the fossil record. This language is misleading. Virtually all scientists agree that humans and other primates came from common ancestors, as the unmodified Texas science education standards accurately state.

The amendments also would incorrectly call into question our understanding of how planets form zones such as the mantle and inner and outer cores. Overall, the amendments would weaken science instruction, waste class time, and cast doubt on the unambiguous facts of evolution as well as geology and space science.

It gets worse for Texas students, too. In addition to the pending amendments, legislation proposed March 13 under House Bill 4224 would, if enacted, again insert inaccurate "strengths-and-weaknesses" language into the state's science standards.

Breathtaking scientific advances and powerhouse universities are Texas hallmarks. Yet, more than three quarters, or 77% of all Texas eighth graders failed to demonstrate science proficiency on the 2005 National Assessment of Educational Progress.

Science and faith pose no conflict for most believers, including the 12,000 Christian religious leaders — 500 of them in Texas — who signed the Clergy Letter Project in support of teaching evolution. But at a time when the nation's future hinges on research advances, the Academy of Medicine, Engineering and Science of Texas has noted, science classrooms are no place for religious debate. We agree — along with the National Center for Science Education, the Texas Citizens for Science, and the 21st-Century Science Coalition with its 1,400 supporters.

Leveraging science and technology to create new jobs will require properly educating all potential innovators. It's time for the Texas State Board of Education to reject misleading amendments to science education standards, once and for all. As Texas science education standards go, so goes the nation. Texas needs to get it right.

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