



Debate on proposed science standards continues

By EVA WOLEVER
Assistant Editor

Published: January 17, 2008

JACKSONVILLE (FBW)—The debate was split at a public hearing in Jacksonville Jan. 3, a meeting scheduled for the public to air questions, comments and concerns regarding the new science standards to be implemented in Florida's public schools for the next ten years.

Mary Jane Tappen, executive director of Florida's Office of Math and Science, said she was "thrilled" by the public interest in the new science standards and by the participation of about 200 people present. Forty-eight people had requested time to speak, and all but three actually offered their opinions.

"Our first goal is that people are informed about the truth of the process—who's involved and what takes place," Tappen said. "That by coming here they're better informed, and regardless of their view—their view is based on facts about the process and about the standards themselves."

In October a 45-member committee appointed by the Florida Department of Education released proposed new standards for teaching science (and other subjects), requiring evolution and diversity knowledge as one of the "big ideas" for elementary students and "bodies of knowledge" for high school students.

The standards for grades 9-12 require students to learn: "Evolution is the fundamental concept underlying all of biology and is supported by multiple forms of scientific evidence. Organisms are classified based on their evolutionary history. Natural selection is the primary mechanism leading to evolutionary change."

One "benchmark" for those grades stipulates students be able to "Explain how evolution is demonstrated by the fossil record, extinction, comparative anatomy, comparative embryology, biogeography, molecular biology (crosscuts with earth/space), and observed evolutionary change."

One of 20 people who voiced concern over the proposed standards, Kim Kendall, a leading activist opposing the standards, said the language in the proposed standards is "very dogmatic" in saying the concept of evolution underlies ALL of biology.

"We are not advocating creationism. We are not asking for religion to be taught in science," said Kendall, a member of First Baptist Church in Jacksonville. "We are asking for evolution to continue to be taught, but to be taught with both its supports and its faults."

Beverly Slough, a member of the St. Johns County school board and president-elect of the Florida School Boards Association, agreed with Kendall. Slough said they aren't advocating the teaching of creationism or Intelligent Design, but instead are advocating "intellectual honesty."

"I think to limit our children and to teach evolution as dogma, not allowing them even open discussion, is not intellectually honest," said Slough, who has a degree in biology.

Recognizing that test scores in science have been "deplorable" among Florida's students, Slough applauded the work done by the committee to emphasize science in the school system. Treating evolution as undisputed fact, however, "shut[s] the door on intellectual honesty," Slough said.

David Campbell, one of the writers of the new standards and a teacher of advanced placement biology in Clay County, disagreed with Slough's and Kendall's assessment of the proposed standards' treatment of evolution.

"Evolution is not presented as dogma," Campbell said. He was one of 20 people who spoke in support of the proposed standards.

According to Campbell, the proposed standards ask students to examine the evidence for evolution and encourage them to think critically.

"Did we eliminate other concepts? Yes we did," Campbell said. "We did not include Intelligent Design based on legal work and on decisions made earlier. I would also point out that we eliminated dogmatic ideas like flat earth, astrology, geocentrism, and the prospect that canals on Mars were actually constructed by intelligent life."

Claiming that the proposed standards are a "vast improvement," Campbell said he spent four weeks out of the last six months away from home to help develop them. He made that commitment because he cares about his students, said Campbell, who also said he was a "lifelong" Christian.

"Science is a process and that was what we went into the meetings with—understanding science and being able to persuade our students what science means," Campbell said. "Biology without evolution is like physics without movement, like chemistry without the periodic table. It's the glue that holds our subject together."

Kendall emphasized that the idea, "evolution is the fundamental concept underlying all biology" is dogmatic.

Referring to the discovery that Pluto is no longer considered a planet by scientists today, Kendall emphasized that scientific opinions can change as scientists explore new information and participate in discussion.

Campbell said that within the scientific community there is no argument about the specifics of evolution.

"The standards we prepared are designed to prepare students for the real world—advanced high school courses, college courses and ultimately the real world in life," Campbell said.

Bill Love, a pediatric dentist in Jacksonville who holds a biology degree from Emory University, agreed with Kendall. He said scientific opinions should change as theories undergo rigorous testing from different areas of science.

"When science and astronomy speaks and then another discipline such as genetics or biology—those that have evolutionary theory need to listen carefully to what they're getting from another scientific discipline," said Love.

An avowed Christian, Love said gathering information from the different scientific disciplines has strengthened his faith "in the process that's taken place in terms of our universe and development of life."

"It's caused me to ask the scientists that I know to be rigorous in their testing of evolutionary theory in the same way that they ask others to be rigorous in their scientific areas," Love continued.

Mark Messinese, a classmate of Love's, talked about the influence one of his high-school teachers had on him in the area of science. Mike Reynolds, Florida's 1986 teacher of the year, mentored Messinese in the scientific method and critical thinking skills, he said.

Those thinking skills and instruction in methodology have served him well and should be emphasized in scientific education, said Messinese, a physician practicing in Neptune Beach.

"Interestingly enough this robust methodology in the scientific method has a biblical basis. And its presuppositions and those of science have serious theistic implications," Messinese said. "In spite of this, I

believe if we teach this methodology we give our children the tools to determine truth and fact and that truth will stand on its own feet and ultimately that's what we want."

Terry Kemple, president of the Tampa Bay Christian public policy group Community Issues Council, said leaving the standards regarding the origin of species as they are allows children to be taught how to think.

"The issue really goes to the basic question of whether our schools are places of learning or indoctrination statements to be used to indoctrinate our young people," Kemple said.

The proposed standards come from people who have a set of beliefs and who want children to learn based on those beliefs, Kemple said.

"My objection to their proposal is that at its core, the suggested science standard relative to evolution is a set of beliefs unproven. They believe that millions of years ago there was nothing and then suddenly there was something. They have no proof. It's not replicable. It's clearly a belief," Kemple said. "You can give it a name and call it evolution, but it is nonetheless a set of beliefs."

Kemple pointed out that a set of beliefs is typically considered a religion or non-religion. There are a large number of learned people who believe evolution is not the correct answer, Kemple said. As evolution is simply a set of beliefs, it should not be taught without stating its shortcomings.

Robin Brown, a recently retired teacher of Polk County, quoted from a number of "learned people" who disagree with the theory of evolution. Drawing from philosopher Karl Popper, astronomer Fred Hoyle, law professor and author Phillip E. Johnson, and quantum physicist Paul Davies; Brown discussed ideas promoted by these men that argue against evolution and/or develop the idea of Intelligent Design.

Quoting Janice Shaw Crouse, a senior fellow at the Beverly LaHaye Institute, the think tank for Concerned Women for America; Brown said many scholars aren't willing to "break ranks" and publish their questions and doubts.

"In fact there is so much heat about the debate, it's no longer academic," Brown quoted Crouse saying.

According to the division for science education, certain principles should be included in the curriculum framework, said Brown, who taught for 31 years—the last 15 years as a middle school science teacher. Those principles should include the evaluation of new ideas and alternative ways of knowing. Students should be taught tolerance and open-mindedness, recognizing the diversity of ideas and acceptance of different views.

Kendall agreed with the idea of academic freedom in the classroom, she told the *Witness* in a later e-mail.

According to Kendall, the school districts in St. Johns, Baker and Taylor counties have composed resolutions against the proposed approach to teaching evolution. The resolutions request that the SBOE maintain academic freedom and integrity in the classrooms.

"After observing the framers and writers as they 'refreshed' the standards, we were disappointed to say the least," Kendall told the *Witness* via email. "But we feel hopeful with our 7-member SBOE which will be making the final decision."

Kendall said the president overseeing the school districts plans to send a copy of the resolution to further awareness in other districts and provide a template for them to use should they choose to do so.

Acknowledging that other districts may not follow suit, Kendall said she urges residents of other counties to encourage their school boards to form their own resolutions.

"We believe with the backing of several school districts this will help encourage the SBOE to vote in a manner that is best for the state of Florida," Kendall told the *Witness*.

The proposed science standards were available online at www.flstandards.org, but the period to offer comments closed Dec. 14. According to statistics offered by Department of Education offices at the Jacksonville meeting, 10,017 reviewers offered 20,993 comments and rated 262,524 proposed new science standards benchmarks.

Although formal comments may no longer be taken on the website, and the final public hearing was Jan. 8 in Miramar, interested persons may continue to offer their views to members of the State Board of Education (<http://www.fldoe.org/board>), the body that will make the ultimate decision on the new standards, probably at its Feb. 19 meeting in Tallahassee.

Copyright © 2001-2007, [Florida Baptist Witness](#).

All rights reserved. Reproduction in whole or in part without permission is prohibited.