The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Judiciary Committee

BILL:	CS/SB 2692
INTRODUCER:	Education Pre-K - 12 Committee, Senator Storms and others
SUBJECT:	The Teaching of Chemical and Biological Evolution
DATE:	April 7, 2008 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Carrouth	Matthews	ED	**Fav/CS**
2.	Treadwell	Maclure	JU	**Pre-meeting**
3.				
4.				
5.				
6.				

Please see Section VIII. for Additional Information:

A. COMMITTEE SUBSTITUTE.....	X	Statement of Substantial Changes
B. AMENDMENTS.....		Technical amendments were recommended
		Amendments were recommended
		Significant amendments were recommended

I. Summary:

This bill creates the Evolution Academic Freedom Act to protect public school teachers who objectively present scientific information relevant to the full range of scientific views regarding chemical and biological evolution. The bill also protects public school students from being penalized if they ascribe to a particular view regarding the theory of evolution.

This bill creates an undesignated section of the Florida Statutes.

II. Present Situation:

Because of the possible correlation with religious beliefs, "evolution is exceedingly controversial, and the controversy it creates goes to the heart of American cultural, social and intellectual life."[1] Following the United States Supreme Court's 1987 decision[2] precluding Louisiana from requiring teachers to afford both evolution and creation science equal time in the

[1] Jay D. Wexler, *Darwin, Design, and Disestablishment: Teaching the Evolution Controversy in Public Schools*, 56 VAND. L. REV. 751, 838 (April 2003).

[2] *See Edwards v. Aguillard,* 482 U.S. 578 (1987).

classroom, presentation of evolution and contrary theories in schools remains at the center of policy discussion and strategic debate on the national and local front.[3]

National Science Curriculum Standards

In 2001, Senator Rick Santorum of Pennsylvania filed an amendment to President Bush's education bill which promoted the idea that educators should be afforded the opportunity to teach students about the evolution-creationism controversy.[4] In support of his amendment, Senator Santorum remarked that the amendment would promote academic freedom in science classrooms by demonstrating to students that that scientific knowledge is not absolute:

> It is a sense of the Senate that deals with the subject of intellectual freedom with respect to the teaching of science in the classroom. . . .[I]t says there should be freedom to discuss and air good scientific debate within the classroom. In fact, students will do better and will learn more if there is this intellectual freedom to discuss. . . .It simply says there are disagreements in scientific theories out there that are continuously tested. Our knowledge of science is not absolute, obviously. We continue to test theories. . . .[5]

The Senate adopted Senator Santorum's amendment by a vote of 91-8. In correspondence to the Chairmen of the House and Senate Education Committees by members of scientific and educational organizations, these opponents of the bill argued that the amendment:

> (1) had not been given adequate consideration by the Senate; (2) interfered with local control over education; (3) improperly singled out biological evolution as a controversial subject, thus masking an anti-evolution agenda; and (4) confused political controversy with scientific controversy in a manner guaranteed to weaken science education.[6]

Ultimately, when the Joint House and Senate Conference Committee later conferred on the bill to present it to the President, it deleted the controversial amendment.[7]

Florida Science Curriculum Standards

Florida has recently addressed the evolution controversy in its recent revisions to its science curriculum standards. This year, the State Board of Education (SBE) adopted revised content standards for K-12 science that include standards related to the scientific theory of evolution. The school district science curriculum will be aligned to the revised standards beginning in the 2008-09 school year, and the Science Florida Comprehensive Assessment Test (FCAT) will begin testing students on the material in 2012.

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[3] Wexler, *supra* note 1, at 752-57.
[4] *Id.* at 757.
[5] *Id.* at 762 (quoting 147 *Cong. Rec.* S6147-48 (daily ed. June 13, 2001) (remarks of Sen. Santorum)).
[6] *Id.* at 766 (citing letter to John Boehner, Chairman, Committee on Education and the Workforce, U.S. House of Representatives, and Edward M. Kennedy, Chairman, Committee on Health, Education, Labor & Pensions, U.S. Senate (Aug. 22, 2001)).
[7] *Id.*

The SBE adopted within the new standards substantial revisions related to *Life Science* and the *Nature of Science*. In the new standards, evolution will be presented as a "fundamental concept underlying all biology."[8] The *Life Science* standards include, among others, the following benchmarks related to evolution:

> SC.912.L.15.1 – Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
>
> SC.912.L.15.2 – Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
>
> SC912.L.15.4 – Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
>
> SC912.L.15.8 – Describe the scientific explanations of the origin of life on Earth.[9]

The new *Nature of Science* standards include, as an example, the following benchmarks:

> SC.912.N.1.3 – Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
>
> SC.912.N.2.2 – Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.

These *Nature of Science* standards are intended to help public school science educators increase the science literacy of their students and to support students not only with acquisition of science content knowledge, but also to have a greater understanding of the scientific method of inquiry and an ability to understand how "scientists know what they know."[10] Taken as a whole, the science standards encourage teachers and students to discuss the full range of scientific evidence related to all science, including evolution.[11]

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[8] Florida Department of Education, *Florida's Student Performance Science Standards*: *Life Sciences*, 89 (February 2008).
[9] *Id.* at 70 and 72.
[10] Florida Department of Education, *2008 Bill Analysis: SB 2692*, 2 (March 2008).
[11] *Id.*

Academic Freedom

State law requires the establishment of curriculum standards,[12] and the local school districts have the obligation to ensure that the standards are taught. Furthermore, as Florida's curriculum standards are revised, they would require incorporation of critical thinking, problem-solving, creativity, innovation, collaboration, and communication skills.[13] The development and encouragement of these skills would necessitate that teachers address controversial subject matter and alternative theories, albeit in a professional and objective manner, which allow students to consider and debate a wide spectrum of ideologies and theories in all subject areas.

According to the Department of Education, there has never been a case in Florida where a public school teacher or public school student has claimed that they have been discriminated against based on their science teaching or science course work.

III. Effect of Proposed Changes:

Under the bill, all teachers are granted the affirmative right to present objectively the full range of scientific views regarding evolution without fear of reprisal or discrimination. Conversely, students are afforded the same protections and rights with respect to their views on evolution.

Under the bill, the term "scientific information" is defined as germane, current facts, data, and peer-reviewed research specific to topics involving chemical and biological evolution.

The bill clarifies that the intent is not to modify the state's adopted curriculum standards nor is the bill intended to promote any religious doctrine or particular religious beliefs.

Objective Presentation of Scientific Information

The bill defines the term "scientific information" as germane current facts, data, and peer-reviewed research specific to evolution as described in the science standards. The bill is silent on who determines whether the teacher's presentation of scientific information meets the definition and is therefore afforded protection under the act. Presumably, the determination would be made by the school district, but this is not stated. Additionally, the definition appears to encompass a wide range of information within the protected presentation by the teacher. The bill suggests that the only requirement is that the information is relevant to the science standards pertaining to evolution, and that the information is presented objectively. Again, the bill is silent on who defines the objectivity of the scientific information presented. The administration and the teacher may have different views on the objectiveness of the information presented.

Teacher Discipline and the Standards

The bill is silent on the school district's or principal's authority to discipline a teacher for failing to teach the curriculum standards. Presumably, if the teacher is protected when delivering the alternate instruction in addition to the standards, the teacher is not protected for failing to teach

[12] Section 1003.41, F.S.
[13] Florida Department of Education, Bureau of Curriculum and Innovation, *Sunshine State Standards, available at* http://www.fldoe.org/bii/Curriculum/SSS/ (last visited April 7, 2008).

the standards or teaching the alternate instruction in lieu of the standards. The Legislature may wish to clarify that a teacher may not choose to abandon the prescribed curriculum when presenting alternate scientific information.

Student's Positions and Views on Evolution

The bill provides a protection for a student's views on chemical or biological evolution. This provision may be unnecessary and may have an unintended consequence. Students already enjoy protection for their views regarding any position under the First Amendment. However, these rights are not without limitations. In fact, the provision may harm school districts and the state if a court were to construe that this provision afforded students a right in excess of the rights afforded under the First Amendment.

The bill provides that a student must be evaluated on his or her understanding of the course materials, but that the student will not be penalized for subscribing to a particular position or view in relation to biological or chemical evolution. It is unclear under the bill if a student's performance in a science class will be measured upon his or her own view or position on evolution, or by a consistent standard applied to each student. This ambiguity may create unanticipated problems with student evaluation and grading in science classes.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. Other Constitutional Issues:

Legislation that relates to the teaching of evolution and other life-origin theories in public schools may touch upon a number of constitutional issues. Following are some of the constitutional issues that may be relevant in analyzing this bill.

Establishment Clause

The Establishment Clause forbids the enactment of any law "respecting an establishment of religion."[14] In order to survive an objection to the constitutionality of a statute based on the Establishment Clause, one must consider whether:

[14] The First Amendment to the United States Constitution states: "Congress shall make no law respecting an establishment of religion. . . ."

- the statute has a secular legislative purpose;
- the primary effect of the statute neither advances nor inhibits religion; and
- there is assurance that the statue does not foster excessive entanglement with religion.[15]

State action violates the Establishment Clause if the state fails to satisfy any of these three prongs.[16]

In *Edwards*, a Louisiana law precluded the teaching of the theory of evolution in public schools unless accompanied by instruction in the theory of "creation science."[17] The law did not require the teaching of either theory unless the other was taught.[18] In evaluating the first prong of the *Lemon* test, the Court concluded that, despite the law's stated purpose to protect academic freedom, this goal was not furthered either by precluding the teaching of evolution or by mandating the teaching of creation science. The Court also reasoned that the law served the purpose of "discrediting 'evolution by counterbalancing its teaching at every turn with the teaching of creationism.'"[19] Finally, the Court opined that the primary purpose of the Louisiana law was to "endorse a particular religious doctrine."[20] As a result, the Court concluded that the Louisiana law was unconstitutional under the Establishment Clause.

Although setting aside the Louisiana law on constitutional grounds, the Court in *Edwards* did note that their ruling did not "imply that a legislature could never require that scientific critiques of prevailing scientific theories be taught."[21] The Court reasoned that the teaching of a variety of scientific theories regarding the origins of humankind in schools could be validly done "with the clear secular intent of enhancing the effectiveness of science instruction."[22]

Similarly, in *Kitzmiller v. Dover Area School Dist*, a U.S. district court held that a school district's policy on the teaching of intelligent design in high school biology classes, which required students to hear a statement mentioning intelligent design as an alternative to Darwin's theory of evolution, amounted to an endorsement of religion in violation of the establishment clause of the First Amendment, since the policy imposed a religious view of biological origins into the biology course.[23]

Unlike the Louisiana law, and arguably the school district's policy in *Kitzmiller*, the bill before this committee does not specifically reference "creationism" or "intelligent design," which are commonly associated with religious views by most people. Rather, the

[15] *Edwards*, 482 U.S. at 583
[16] *Id.*
[17] *Id.* at 578
[18] *Id.*
[19] *Id.* at 589 (quoting *Aguillard v. Edwards*, 765 F.2d 1251, 1257 (5th Cir. 1985)).
[20] *Edwards*, 482 U.S. at 594.
[21] *Id.* at 593.
[22] *Id.* at 594.
[23] *Kitzmiller v. Dover Area School Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005).

bill expresses that teachers may "objectively present scientific information relevant to the full range of scientific views regarding chemical and biological evolution." If teachers present this scientific information objectively, without promoting or endorsing it, it appears that a court could conclude that the law passes constitutional muster as suggested in *Edwards*.

Although the bill expresses its intent not to promote any religious doctrine, it appears that one of the primary purposes of the legislation is to remedy "discrimination" and "other adverse consequences" as a result of teaching the "full range of scientific views regarding chemical and biological evolution." The constitutionality of this bill could turn on a court's determination whether the bill has the clear secular intent of enhancing the effectiveness of science instruction as indicated in *Edwards.*

It should also be noted that, because evolution and countervailing theories are subject to intense controversy, objective presentation of scientific information critical of the theory of evolution may be difficult to achieve in the classroom. If at any point objectivity is abandoned, it is possible that a court could determine that the state is promoting religion in violation of the Establishment Clause.

Free Exercise Clause

The Free Exercise Clause guarantees "first and foremost, the right to believe and profess whatever religious doctrine one desires."[24] Moreover, "[a]t a minimum, the protections of the Free Exercise Clause pertain if the law at issue discriminates against some or all religious beliefs or regulates or prohibits conduct because it is undertaken for religious reasons."[25]

In *Mozert v. Hawkins County Bd. of Educ*ation, the Sixth Circuit Court of Appeals held that teaching or using books referring to evolution does not violate the free exercise rights of persons believing in the literal truth of the biblical story of creation, since the mere exposure to objectionable ideas, without governmental compulsion to affirm or deny a religious belief, is insufficient to support a free exercise complaint.[26] In *Epperson v. State of Arkansas,* the Court concluded that a state statute prohibiting any teacher in the state schools from teaching the Darwinian theory of evolution is contrary to the mandate of the First Amendment, and in violation of the Fourteenth Amendment, as conflicting with the constitutional prohibition of state laws respecting an establishment of religion or prohibiting the free exercise thereof.[27]

Free Speech/Expression Rights of Students

Although public school students do not shed their constitutional rights to freedom of speech or expression at the schoolhouse gate, the First Amendment rights of students in the public schools are not automatically coextensive with the rights of adults in other

[24] *Malicki v. Doe*, 814 So. 2d 347, 354 (Fla. 2002) (quoting *Employment Div. v. Smith*, 494 U.S. 872, 877 (2000)).
[25] *Id.* (quoting *Church of Lukumi Babalu Aye v. City of Hileah*, 508 U.S. 520, 532 (1993)).
[26] *Mozert v. Hawkins County Bd. of Educ.* 827 F.2d 1058 (6th Cir. 1987).
[27] *Epperson v. State of Arkansas*, 393 U.S. 97 (1968).

settings, and must be applied in light of the special characteristics of the school environment.[28]

As currently written, the bill appears to protect a student's views on chemical or biological evolution. While a student maintains free speech rights, as indicated above, those rights are not without limitation. It appears that this provision in the bill may be interpreted to expand the rights of students in excess of the First Amendment.

Free Speech/Expression Rights of Teachers

The First Amendment affords ample freedom of religious expression; however, it does not necessarily include the right for a teacher or a student to have an audience held captive or to require other students or teachers to participate in or adhere to specific doctrine.[29] Accordingly, while teachers retain their First Amendment rights, public schools may limit classroom speech to promote educational goals. School committees may regulate a teacher's classroom speech if the regulation is reasonably related to legitimate pedagogical concern and the school provides the teacher with notice of what conduct was prohibited.[30] A teacher's statements in class during instructional periods are part of the curriculum and regular class activity and thus subject to reasonable speech regulation.[31]

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

None.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

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[28] *Axson-Flynn v. Johnson*, 356 F.3d 1277, 1284 (10th Cir. 2004).
[29] U.S. Department of Education – *Guidelines to Religious Expression in Public Schools*, 127 (May 1998).
[30] *Id.*
[31] *Ward v. Hickey*, 996 F.2d 448, 453 (1st Cir. 1993).

VIII. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Education Pre-K-12 on March 26, 2008:
The CS for SB 2692:

- Defines the term scientific information as germane current facts, data, and peer-reviewed research specific to topics involving chemical and biological evolution as prescribed in Florida's Sunshine State Standards; and
- Requires, rather than permits, a student to be evaluated on his or her understanding of the science standards.

B. Amendments:

None.