

1 STATE OF OKLAHOMA

2 1st Session of the 53rd Legislature (2011)

3 SENATE BILL 554

By: Brecheen

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6 AS INTRODUCED

7 An Act relating to school curriculum; stating
8 legislative intent; requiring the State Board of
9 Education to adopt certain curricular standards;
10 providing that schools shall not prohibit teachers
11 from providing certain information to students;
12 protecting teachers from retaliation for providing
13 certain information; allowing students to be held
14 accountable for information taught in a course;
15 defining term; providing for codification; providing
16 for noncodification; providing an effective date; and
17 declaring an emergency.

18 BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

19 SECTION 1. NEW LAW A new section of law not to be
20 codified in the Oklahoma Statutes reads as follows:

21 It is the intent of the Legislature that students in public
22 school receive a comprehensive education in science and learn how to
23 compare and contrast a variety of scientific viewpoints.

24 SECTION 2. NEW LAW A new section of law to be codified
in the Oklahoma Statutes as Section 11-105.2 of Title 70, unless
there is created a duplication in numbering, reads as follows:

1 A. Notwithstanding the provisions of Section 11-103.6 of Title
2 70 of the Oklahoma Statutes, the State Board of Education shall
3 adopt curricular standards requiring the teaching of all relevant
4 scientific information on the biological origins of life.

5 B. The State Department of Education, or any school district or
6 school district administrator, shall not prohibit any teacher from
7 informing students about relevant scientific information regarding
8 either the scientific strengths or scientific weaknesses of
9 controversial topics in sciences, when being taught in accordance
10 with adopted standards and curricula. Controversial topics in
11 sciences include but are not limited to biological origins of life
12 and biological evolution.

13 C. The State Board of Education shall adopt standards and
14 curricula that require students in all science courses to:

15 1. Know the definition of science and understand that it has
16 limitations. Science, as defined by the National Academy of
17 Sciences, is the "use of evidence to construct testable explanations
18 and predictions of natural phenomena, as well as the knowledge
19 generated through this process." This vast body of changing and
20 increasing knowledge is described by physical, mathematical, and
21 conceptual models. Students should know that some questions are
22 outside the realm of science because they deal with phenomena that
23 are not scientifically testable;

1 2. Analyze, evaluate, and critique scientific explanations by
2 using empirical evidence, logical reasoning, and experimental and
3 observational testing, including examining all sides of scientific
4 evidence of those scientific explanations, so as to encourage
5 critical thinking by the student;

6 3. Communicate and apply scientific information extracted from
7 various sources such as current events, news reports, published
8 journal articles, and marketing materials;

9 4. Know that scientific hypotheses are tentative and testable
10 statements that must be capable of being supported or not supported
11 by observational evidence. Hypotheses of durable explanatory power
12 which have been tested over a wide variety of conditions are
13 incorporated into theories;

14 5. Know that scientific theories are based on natural and
15 physical phenomena and are capable of being tested by multiple
16 independent researchers. Unlike hypotheses, scientific theories are
17 well-established and highly-reliable explanations, but may be
18 subject to change as new areas of science and new technologies are
19 developed; and

20 6. Distinguish between scientific hypotheses and scientific
21 theories;

22 D. The State Board of Education shall adopt standards and
23 curricula that require students in grades eight through twelve to:
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- 1 1. Analyze and evaluate how evidence of common ancestry among
2 groups is provided by the fossil record, biogeography, and
3 homologies, including anatomical, molecular, and developmental;
- 4 2. Analyze and evaluate scientific explanations concerning any
5 data of sudden appearance, stasis, and sequential nature of groups
6 in the fossil record;
- 7 3. Analyze and evaluate how natural selection produces change
8 in populations, not individuals;
- 9 4. Analyze and evaluate how the elements of natural selection,
10 including inherited variation, the potential of a population to
11 produce more offspring than can survive, and a finite supply of
12 environmental resources, result in differential reproductive
13 success;
- 14 5. Analyze and evaluate the relationship of natural selection
15 to adaptation and to the development of diversity in and among
16 species;
- 17 6. Analyze and evaluate the effects of other evolutionary
18 mechanisms, including genetic drift, gene flow, mutation, and
19 recombination;
- 20 7. Analyze and evaluate scientific explanations concerning the
21 complexity of the cell; and
- 22 8. Know that taxonomy is a branching classification based on
23 the shared characteristics of organisms and can change as new
24 discoveries are made and be able to:

- a. define taxonomy and recognize the importance of a standardized taxonomic system to the scientific community,
- b. categorize organisms using a hierarchical classification system based on similarities and differences shared among groups, and
- c. compare characteristics of taxonomic groups, including archaea, bacteria, protists, fungi, plants, and animals.

9. Analyze and evaluate a variety of fossil types such as transitional fossils, proposed transitional fossils, fossil lineages, and significant fossil deposits with regard to their appearance, completeness, and alignment with scientific explanations in light of this fossil data;

10. Explain how sedimentation, fossilization, and speciation affect the degree of completeness of the fossil record; and

11. Evaluate the significance of the terminal Permian and Cretaceous mass extinction events, including adaptive radiations organisms after the events. Transitional fossils, proposed transitional fossils, fossil lineages, and significant fossil deposits with regard to their appearance, completeness, and alignment with scientific explanations in light of this fossil data.

1 E. No teacher shall be reassigned, terminated, disciplined or
2 otherwise discriminated against for providing scientific information
3 being taught in accordance with adopted standards and curricula.

4 F. This section only protects the teaching of scientific
5 information and specifically does not protect the promotion of any
6 religion, religious doctrine, or religious belief.

7 G. Students may be held accountable for knowing and
8 understanding material taught in accordance with adopted standards
9 and curricula, but they shall not be penalized in any way for
10 subscribing to a particular position of a scientific debate.

11 H. For purposes of this section, "scientific information" means
12 information derived from observation, experimentation and analysis
13 of the natural world conducted to determine the nature of or
14 principles behind the aspects being studied. Scientific information
15 is not excluded from this definition solely on the basis that it
16 coincides with the tenets of some or all religious beliefs or
17 doctrines. This definition does exclude information based solely on
18 religious writings, beliefs or doctrines.

19 SECTION 3. This act shall become effective July 1, 2011.

20 SECTION 4. It being immediately necessary for the preservation
21 of the public peace, health and safety, an emergency is hereby
22 declared to exist, by reason whereof this act shall take effect and
23 be in full force from and after its passage and approval.

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