

January 26, 2005

Kansas State Board of Education
c/o Kansas State Department of Education
120 SE 10th Avenue
Topeka KS 66612-1182

As a geologist, I have taught at UAB, an Alabama public university, for 25 years. In 1983 I served at the pleasure of the State Board of Education as Vice Chair of the Alabama Science Textbook Committee, and since then I have contributed to the debate over whether to include any form of creationism in the Alabama science curriculum standards or science textbooks purchased with state funds.

I see many of the same issues in the ongoing debates in Kansas, driven primarily by those who would prefer to balance the now-monolithic treatment of evolution with something else. In Kansas, and other areas, the newest challenge is intelligent design.

I understand that the Intelligent Design Network has submitted its proposed revisions to the Kansas Science Standards. I have reviewed the draft of this document dated Dec. 10, 2004.

I urge the Board to not revise its draft science standards according to the suggested revisions of the Intelligent Design Network – please see my comments below.

Unlike the Intelligent Design Network (IDN), I will not attempt to exhaustively comment on each of the suggested revisions – rather, I have summarized below the most important points for you to consider. Since the early 1980s, we have considered the same general *issues* here in Alabama.

1) The IDN recommends that science be described as “evidence-based” rather than “naturalistic”. But science is already evidence-based, and it is also naturalistic. These are not mutually exclusive properties.

2) The IDN recommends permitting teachers to discuss evidence for and against evolution in a “neutral” way. But science is already neutral, because it is evidence-based, and, much to the objection of the IDN, agnostic as well.

3) The IDN recommends that evolution be described as “theory”, not a “fact”. We had this argument in Alabama in 1994, the result of which is our (in)famous textbook “insert” that became the model for Cobb County Georgia, and other districts. Evolution is both a fact and a theory, just as gravity is both a theory and a fact. The Alabama insert is an embarrassment to this state.

4) The IDN suggests that a distinction be made between scientific investigations of contemporary phenomena and that of historical phenomena. As a paleontologist, I investigate the past, but not by criteria different from that needed to explore the present.

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The primary criterion for assessing the strength of hypotheses is the conformity of the hypothesis with the evidence, regardless of whether the evidence is 10 minutes or 10 million years old.

5) The IDN states incorrectly that the nucleotide sequences are “not dictated by any known...law”. Sure they are – nucleotide sequences that result in defective, non-functional, or otherwise disadvantaged organisms will disappear by extinction of the organism. Natural selection, a major mechanism of evolution, dictates that of all the nucleotide sequences possible, only particular sequences will result in a functional organism that can live in its environment.

6) The IDN proposes that intelligent design “offers a more complete description of biological evolution”. I suppose so, but then our understanding of evolution would not be scientific. And what the Kansas science standards address is the way science is taught in the public school classroom, not in a church school on Sunday.

In short, the IDN seeks to subvert and confuse the nature of the scientific enterprise.

As numerous other scientists have noted, – intelligent design isn’t really about science, it’s about religion, and the IDN must believe either that you’re not smart enough to understand this critical distinction, or that you will bow to public pressure at the expense of upholding contemporary standards of science education as advocated by the most prestigious science organizations in the United States, the American Advancement for the Association of Science, and the National Academy of Sciences.

After all, the core of Intelligent Design is a master Designer who directs the formation of complex life, and indirectly happens to accord with a personal deity and savior for many people. But scientific understanding is not based upon the popularity of religious doctrine.

I cannot agree with this strategy that seeks to merge science and (one brand of) religion. In fact, to the extent that such a merger is possible at all, I believe it would only occur in Heaven. And for that reason alone, religiously-based ideas like intelligent design belong no more in the Kansas science standards than in Alabama’s.

I urge you to reject the challenges by creationists of whatever stripe, including the intelligent design camp, to subvert the Kansas science standards.

Sincerely yours,



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