

**Remarks of Greg Lassey  
To the Kansas State Board of Education  
April 13, 2005**

Ladies and Gentlemen:

I am Greg Lassey, a member of the Kansas Science Writing Committee. I have a Master's degree in Education and have taught science for 29 years.

I am one of the eight individuals that have proposed changes to Draft 2 of the Science Standards.

Our group has been asked to briefly explain to the Board our proposals. Dr. William Harris is probably best suited to provide that explanation. However, he is participating in a meeting of the American Heart association's Nutrition Committee in Washington, D.C. Accordingly, he asked me to speak for him.

I also have with me Mr. John Calvert. John is a lawyer with training and experience in geology. We have asked John to carry much of the burden of explaining our proposals. We have asked him to help organize and present the case for our proposals at the hearings scheduled in May. He will comment briefly on that process towards the end of my presentation.

I'd like to start out with a little story of an experience I had as a "new kid on the block" in this committee. In our meetings, Dr. Case always allows a period of time on the agenda when the public can come and speak to us for few minutes. Well, one day, in walks a gentleman named Harry McDonald who stated that he was a former science teacher and was president of this and chairman of that, and so on, and he made a presentation during the public input period. Remember, I was brand new at this endeavor, not aware of the degree of rancor involved, but he made a statement that, for me, utterly destroyed any credibility he hoped to ever establish. He flat out said, "There **is no** scientific controversy over evolution." Obviously, the rest of what he had to say became patently irrelevant. And now we hear him and others repeatedly stating as a mantra, statements about our proposals that just aren't so. For example they'll say that:

*"They're trying to put intelligent design into the standards."* Or

*"They're trying to put religion into the standards."*

To illustrate how pervasive these misconceptions are, just before I arrived at this building several minutes ago, A reporter on a radio program in Wichita, referring to this meeting, got it dead wrong. He said that "***Today the board would hear from the minority group who will attempt to minimize evolution and insert creationism.***" That statement is patently untrue and makes one question either the professional skill or integrity of that reporter.

So you see, this is the mantra. We heard it over and over at the public hearings. This is what is called a STRAWMAN argument. A straw man is a false issue that is inserted into the debate to take the eye of the audience off the real issue. It is when the opponent misrepresents your position into a weakened and inaccurate form and then presents arguments that easily knock it down.... like a straw man.

These reporters and much of the public have been duped. So, let me try to straighten this out.

Please understand our proposals ***do not seek to incorporate intelligent design*** into the standards. We have made this perfectly clear in the cover letters that accompanied both Drafts 1 and 2 of our proposals. In both we state, "Some have argued that the teaching of intelligent design, a scientific

alternative to naturalistic theories of origins, should be required. At this point in time, we do not agree with this. Rather, we suggest that teachers be allowed to address scientific alternatives at their own discretion if they sense that it is appropriate for a given class.” Our proposals seek to have students critically analyze evolution. Since our opposition cannot reasonably argue against this central position, they must create a straw man –*Intelligent Design* – that takes the eye of the public off the real issue – CRITICAL ANALYSIS OF EVOLUTION. Should students understand both sides of the scientific controversy about evolution? The rest of the world is engaged in that debate, so why should students not be? The newspapers and other media are whetting their curiosity, so why not provide a neutral and unbiased discussion instead of making them satisfy their curiosity with Internet Bloggers?

The second straw man argument is that *we are trying to put religion into the standards*. This is completely untrue. It totally ignores our concerted efforts to do just the opposite. Instead of seeking to import a religious problem into science, *we seek to take a current one out*.

The science of origins is an issue that unavoidably impacts religion. The religious problem arises when that area of science is not conducted or taught objectively, but rather with a bias that favors one side or the other. So, how do you remove the religious problem? It is really very simple. You remove the bias by showing students both sides of the scientific controversy. You remove the bias by appropriately INFORMING students. It is scientific objectivity that will remove the religious problem from origins. Our current standards and the proposals in the current Draft 2 have *created* the religious problem by inserting a *naturalistic bias* that is both undisclosed and irrefutable. This bias requires that students be shown only one side of a controversy that unavoidably impacts religion. The false argument, “that we seek to import religion” (the straw man) is designed to take the eye of the public off the clear religious problem that currently guides the standards.

I would like now to turn to the specific issues raised by the Minority Report.

The first proposed change is to add the word, “informed,” to the mission statement. The controversy over this one word goes to the core of the debate. Should we *inform* students about evolution and origins or should we dogmatically present them with information that will support a philosophical presupposition that has a major impact on religious belief? Remarkably, our peers, - all dedicated and professional educators, voted against this most simple and reasonable addition. *Why?* We do not know why they rejected this change, but it certainly gives the bizarre impression that they oppose *informing* students. Since that surely cannot be true, we are lead to conclude that our colleagues were simply biased against any proposal, however reasonable, that we might have submitted. This bias, most clearly seen in this one rejection, is what compelled us to submit our proposals directly to the Board in December. Ask yourselves: is this change appropriate? If so, then we would ask you to consider the extent to which the rest of our proposals further or detract from the goal of informing students.

Next, I want to address *the definition of science*.

Our opponents have charged us with changing the very definition of science, somehow implying that the definition in the current standards was somehow the “official” definition, the definition that all scientists have always used. Nothing could be further from the truth. Our research reveals that Kansas is the only state in the union whose science standards use that definition, the one that is in the current standards.

Search the national science education standards for the phrase, “natural explanations,” and it will not be found. Instead you will find a discussion of scientific knowledge that is very objective and consistent with the definition that we propose.

The arcane definition proposed by the Majority was specifically rejected by the Ohio State Board a couple of years ago. In its place, that board unanimously embraced the very definition we are offering to you. Why? Why is the definition so important? It is important because the current definition inserts a bias that has the effect of preventing critical analysis of evolution and origins. In other words, it is a “science stopper.” It guarantees that students will be shown only one side of the scientific controversy about origins. An objective definition of science is needed if we are going to do both good science and remove the religious problem.

Next, we have proposed that students learn the critical *distinction between historical and experimental science*.

Ernst Mayr, one of the most revered evolutionary biologists wrote five years ago in *Scientific American*:

“Darwin introduced **historicity** into science. Evolutionary biology, in contrast with physics and chemistry, is a **historical** science—the evolutionist attempts to explain events and processes that have already taken place. *Laws and experiments are inappropriate techniques for the explication of such events and processes.* Instead *one constructs a historical narrative*, consisting of a tentative reconstruction of the particular scenario that led to the events one is trying to explain.”

This is a very profound and true statement. A problem with Draft 2 is that it fails to deal with the historical side of science. It fails to explain to students that historical sciences like evolutionary biology, paleontology, many aspects of geology and anthropology are very different than sciences that seek to explain gravity, the theory of relativity or germ theory. Historical sciences deal with claims about the causes of singular events that were not observed, that cannot be observed in the laboratory, and that occurred in the remote past where clues are often very sparse and incomplete. In short, historical theories cannot be tested as directly as empirical theories, and thus the explanations drawn from historical sciences cannot be held with the same confidence as explanations drawn from experimental sciences. The very essence of science is the testing of its claims, and simply finding evidence supporting one particular historical theory does not prove the theory true unless that evidence at the same time rules out other competing theories. This distinction is absolutely critical to the debate over origins, because origins is a historical science and currently, competing theories are not permitted or are at least discouraged.

The bulk of our proposals *focus on the evolution benchmark*.

We believe that one reason that the “evolution” question is so confusing and controversial is because it is not explained or taught in sufficient detail. Its rough edges are glossed over, its mechanisms hidden in generalities, and its assumptions unstated. Thus, few people really understand its core claims, its limitations and the scientific problems that it has not solved. If students are going to be truly informed about evolution we need to go beneath the veneer that currently characterizes the teaching of Darwin’s theory. We need to introduce them to the scientific controversies surrounding it, so that they can use that information in making decisions about which parts of the theory are well-supported and which are not. These decisions can have a direct impact on their lives.

Accordingly, our proposals seek to have students provided with a more complete definition of evolution and its mechanism. Because it is a historical science that derives its power from clues left in the past called *fossils*, it is important that they be shown a more complete picture of the fossil record and how that record is either consistent or inconsistent with the claims of evolution. For example, A major evolutionary claim is that change occurs gradually. However, in many respects

the fossil record suggests that increases in complexity occur very suddenly. Should we only show students the evidence that supports gradualistic theory while suppressing the contrary evidence? Our opponents claim that we are “seeking to weaken evolution” by teaching criticisms of it. I ask you, what kind of theory is beyond criticism? We constantly hear that “science is self-correcting”, but how can it possibly correct itself if consistent evidence against it is suppressed or ignored? Our proposals seek to correct this deficiency in the Kansas Science Standards.

Finally, we have recommended some changes in *standard 7, The Nature of Science* in order to describe its nature in more objective terms. Science has produced great benefits to society but it has also enabled great harm. It is a tool that should be very carefully employed. It is a tool that should be used to help us make *informed* decisions. It is not an enterprise designed to lead us to think in a particular way.

Scientific knowledge impacts not only government and environment, but also ethics, morals and religion. Accordingly, science can, and on occasion has, become a religion in its own right. Scientific knowledge must remain theoretical and truly subject to evidence-based revision if it is to be useful to the culture. It cannot be dogmatic. At its core, science must remain objective.

You will hear from our opponents that science is objective and that it is we, not they, that are raising the straw man. We agree that in most areas of science, it is conducted objectively because most scientific investigations study the world as it is today and how it works. However, in the area of origins science, where questions such as “where did we come from?” arise, open consideration of all explanations is not allowed. Only one answer is permitted, and that is, we, and all of nature are merely physical objects that derive only from matter, energy and the forces of nature, all purely by chance. There is much evidence to the contrary, and it is our contention that science should follow the evidence wherever it leads regardless of its philosophical or religious implications.

Finally, with respect to the upcoming hearings, we have asked John Calvert to present to you a number of experts who will provide testimony about our proposals. He is here today and would like to speak briefly about the need for the hearings. After he speaks, we will both be open for questions.

Thank you.