

IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

1 TAMMY J. KITZMILLER, et al., :  
2 Plaintiffs :  
3 : Case Number  
4 vs. : 4:04-CV-02688  
5 :  
6 DOVER AREA SCHOOL DISTRICT; :  
DOVER AREA SCHOOL DISTRICT :  
BOARD OF DIRECTORS, :  
7 Defendants :

MORNING SESSION

TRANSCRIPT OF PROCEEDINGS  
OF BENCH TRIAL

Before: HONORABLE JOHN E. JONES, III

Date : October 6, 2005

Place : Courtroom Number 2, 9th Floor  
Federal Building  
228 Walnut Street  
Harrisburg, Pennsylvania

COUNSEL PRESENT:

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RICHARD THOMPSON, ESQ.

For - Defendants

Lori A. Shuey, RPR, CRR  
U.S. Official Court Reporter

I N D E X

WITNESSES

<u>For - Plaintiffs:</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>
Barbara Forrest, Ph.D.		3	86	92
Jennifer Miller	93			

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1 THE COURT: Good morning to all. We resume  
2 with Professor Forrest's testimony, and we remain in  
3 Mr. Thompson's cross-examination.

4 MR. THOMPSON: Thank you, Your Honor.

5 CROSS-EXAMINATION (cont'd.)

6 BY MR. THOMPSON:

7 Q. Good morning, Professor Forrest.

8 A. Good morning.

9 Q. I'm going to ask you to refer to your expert  
10 witness report. Do you have a copy of that with you?

11 A. I do.

12 Q. On the first page of that report, under one,  
13 conclusions about the intelligent design creationist  
14 movement, you state, My area of expertise is the  
15 nature and strategy of the intelligent design  
16 creationist movement.

17 When did you first hear about the phrase  
18 "intelligent design creationist movement"?

19 A. In exactly those terms?

20 Q. Or let's focus it a little more, limit it to  
21 "intelligent design creationist." When did you first  
22 hear that phrase?

23 A. That came up in 1994 when I was involved in  
24 efforts to prevent the introduction into the science  
25 classes of Livingston Parish when I was involved in

1 that effort that we talked about yesterday.

2 Q. And isn't it true that the proponents of  
3 intelligent design do not use that phrase,  
4 "intelligent design creationist"?

5 A. They don't like to be called creationists.

6 Q. I'm talking about the phrase. Is it true  
7 that they themselves do not use the phrase  
8 "intelligent design creationist"?

9 A. That's correct, they don't use that phrase.

10 Q. And it's true, also, that that phrase is  
11 used by people who are critical of the intelligent  
12 design theory. Isn't that correct?

13 A. That phrase is used by critics of the  
14 movement.

15 Q. So, really, it's a pejorative term?

16 A. No, sir, it's a descriptive term.

17 Q. But it's used by people who are critical of  
18 the movement?

19 A. People who are critical of the movement  
20 because they understand it as a creationist movement.  
21 They see it for what it is.

22 Q. And so it is a description that those who  
23 are opposed to intelligent design use?

24 A. Yes.

25 Q. Now, during your testimony yesterday, you

1 identified Professor Michael Behe as one of the  
2 leaders of the intelligent design movement. Is that  
3 an accurate description of your testimony?

4 A. Yes.

5 Q. Do you want to add any descriptives to that?

6 A. I can't think of any that I need to add. He  
7 is one of the very early members of the group.

8 Q. Yet you barely mention Professor Behe in  
9 your expert report. Isn't that correct?

10 A. That's correct.

11 Q. I think you've mentioned him in one line.  
12 Isn't that correct?

13 A. In my report?

14 Q. Yes.

15 A. I'm sorry, I don't have a count of the lines  
16 in which I mentioned him.

17 Q. Okay. I want you to go to Page 48 of your  
18 expert report. And under the paragraph, No intentions  
19 to follow standard procedure for scientific peer  
20 review, that subheading, do you see that there?

21 A. Yes, yes.

22 Q. In about the middle of the paragraph starts  
23 the sentence, Kenneth Miller, an evolutionary  
24 biologist at Brown University, who has published  
25 scientific criticism of Behe's concept of irreducible

1 complexity, has commented on Behe's refusal to avail  
2 himself of this opportunity. And that is an  
3 opportunity to, I guess, discuss his concept in front  
4 of various conferences, scientists. Is that correct?

5 A. Yes. Dr. Behe is a member of the American  
6 Society for Biochemistry and Molecular Biology. If  
7 you look at the Web site for that organization, it  
8 states that its members have the right to make  
9 presentations on any subject of their choice at their  
10 meetings. Dr. Behe has never availed himself of that  
11 opportunity, despite the fact that he is a member of  
12 that organization.

13 Q. And what is interesting in your report is  
14 the fact that you acknowledge that Kenneth Miller has  
15 published scientific criticisms of Behe's irreducible  
16 complexity concept.

17 A. Yes.

18 Q. So there is a controversy going on between  
19 scientists regarding the concept of irreducible  
20 complexity. Is that correct?

21 A. No, sir, not of the kind that the Discovery  
22 Institute is telling people that there is. The  
23 controversy that the intelligent design proponents are  
24 trying to convince people exists is a controversy over  
25 the status of evolutionary theory within the

1 mainstream scientific community. That controversy is  
2 nonexistent, and that is what Dr. Miller is responding  
3 to.

4 Q. Well, he's publishing scientific criticisms.  
5 Is that correct?

6 A. He is a scientist who is responding to the  
7 nonscientific claims of Dr. Behe. He has the position  
8 as a scientist which gives him the prerogative to do  
9 that.

10 Q. And so he is going around and talking about  
11 and criticizing Behe's concept of irreducible  
12 complexity. Would that be a fair statement?

13 A. He is a very prominent critic of that, yes.

14 Q. Okay. And he is doing that at science  
15 meetings?

16 A. I'm not aware of what he has said at science  
17 meetings about this. Dr. Miller has been a very  
18 active voice in many different venues for the  
19 integrity of science.

20 Q. And then you go on in this paragraph, and  
21 it's a quote, quotation marks, it's a purported quote  
22 from Dr. Behe. Quote, If I thought I had an idea that  
23 would completely revolutionize cell biology in the  
24 same way that Dr. Behe -- excuse me, this is a  
25 quote -- that's not the quote I'm looking for.

1 A. This is Dr. Miller.

2 Q. Yeah, that's Miller. This is what  
3 Dr. Miller says. Quote, If I thought I had an idea  
4 that would completely revolutionize all cell biology  
5 in the same way that Professor Behe thinks he has an  
6 idea that would revolutionize biochemistry, I would be  
7 talking about the idea at every single meeting of my  
8 peers I could possibly get to. Is that an accurate  
9 quote from Ken Miller?

10 A. That is accurate.

11 Q. And then there's the purported quote from  
12 Behe that you've put in there. Behe, however,  
13 declines. Quote, I don't just think that large -- I  
14 just don't think that large scientific meetings are  
15 effective forums for presenting these ideas, period,  
16 end quote. Is that a quote that you got from  
17 Dr. Behe?

18 A. That is not a purported quote, sir. That is  
19 a quote in the Chronicle of Higher Education in the  
20 article by Beth McMurtrie. Both of the quotes by  
21 Dr. Miller and Dr. Behe come from that publication.

22 Q. It's a quote that you saw in a publication?

23 A. Yes.

24 Q. Okay. Behe is not an Evangelical  
25 Protestant, is he?

1 A. Dr. Behe is a Roman Catholic.

2 Q. So he's not a fundamentalist, as well?

3 A. He's not a fundamentalist Protestant.

4 Q. Okay. Have you ever personally interviewed  
5 Dr. Behe?

6 A. No.

7 Q. You are aware, I think we've discussed  
8 before, that he authored the book *Darwin's Black Box*?

9 A. Yes.

10 Q. Have you read that book?

11 A. I have read parts of that book.

12 Q. Did you read parts of it where he describes  
13 the bacterial flagellum?

14 A. Yes.

15 Q. Does he describe it in religious terms?

16 A. No.

17 Q. Have you read the book where he discusses  
18 the blood clotting cascade?

19 A. A separate book? He only has --

20 Q. No, the same book where he's discussed -- in  
21 the same book where he's --

22 A. I've seen his discussion of the blood  
23 clotting cascade and the bacterial flagellum in a  
24 number of places. The specific parts of *Darwin's*  
25 *Black Box* in which he speaks in religious terms,

1 specifically the last chapter.

2 Q. But he describes the bacterial flagellum in  
3 scientific terms. Is that correct?

4 A. Scientific terms as he understands them.

5 Q. Observing the data. Is that correct?

6 A. Yes.

7 Q. Okay. And he talks about the blood clotting  
8 cascade, as well, in scientific terms?

9 A. Yes.

10 Q. He doesn't use religious terms to describe  
11 these biological systems, does he?

12 A. No, not in those descriptions. When he is  
13 referring to "design," though, that is a religious  
14 term.

15 Q. That wasn't my question.

16 A. When he introduces that into his discussion,  
17 then that would be a religious term.

18 Q. But that wasn't my question, was it?

19 A. In specific places in the book, yes, he does  
20 speak about it in a scientific fashion.

21 Q. My question was, when he discusses the blood  
22 clotting cascade, does he discuss that in scientific  
23 terms? And your answer was yes, as I understand it.

24 A. I said when he introduces the concept of  
25 design, then he's introducing it as a religious term.

1 But, no, when he's discussing the blood clotting  
2 cascade, per se, yes, he's looking at it as a  
3 scientific idea, yes.

4 Q. And when he is discussing the blood clotting  
5 cascade, per se, he is not discussing it or describing  
6 it in religious terms, is he?

7 A. That's correct.

8 Q. Okay. Your expert report does not even cite  
9 that book, does it?

10 A. Dr. Behe was not one of the primary subjects  
11 of my expert witness report.

12 Q. Well, the question is, your expert report  
13 does not even cite that book, does it?

14 A. No. It was not one of the primary objects  
15 that I looked at.

16 Q. Yet you considered him one of the leaders in  
17 the intelligent design movement. Is that correct?

18 A. I do.

19 Q. And your expert report does not even quote  
20 from the book, does it?

21 A. No.

22 Q. Okay. After you follow this quote of  
23 Dr. Behe, I just don't think that large scientific  
24 meetings are effective forums for presenting these  
25 ideas, end quote, you start the next sentence with,

1 Yet, and you conclude that sentence with, he has made  
2 numerous presentations in churches, period.

3 A. Yes.

4 Q. That particular comment has nothing to do,  
5 does it, with the scientific validity of the concept  
6 of irreducible complexity?

7 A. The scientific validity of irreducible  
8 complexity is something that has to be addressed by  
9 somebody other than myself. I am not a scientist.  
10 Professor Miller has already addressed that. There  
11 was really no need for me to take that up in my expert  
12 witness report. It wasn't what I was asked to do.  
13 What I was asked to do is to document my research  
14 findings that this is a religious movement.

15 Dr. Behe, in his capacity as a participant  
16 in this movement, reflects the entire program. He  
17 does not make scientific presentations about an idea  
18 that he purports -- that he says is scientific. He  
19 does speak frequently about irreducible complexity and  
20 other aspects of his work in churches and other  
21 religious outlets.

22 That is the part of this issue that I was  
23 asked to cover. That is why I'm not talking about  
24 irreducible complexity in my report. That's not the  
25 area of my expertise.

1 Q. But yet you focus on the fact that he has  
2 made numerous presentations in churches?

3 A. Dr. Behe is the one that has made those  
4 presentations, and I am making people aware of that in  
5 my work.

6 Q. And this is a part of your scholarly study?

7 A. Yes. It's a part of the research that I did  
8 because it reflects the nature of the intelligent  
9 design movement.

10 Q. Are you aware that Dr. Behe has given many  
11 presentations in scientific settings regarding the  
12 concept of irreducible complexity?

13 A. Could you explain what those scientific  
14 settings are for me, please?

15 Q. The settings?

16 A. Yes. What are the settings that you're  
17 referring to?

18 Q. Okay. The Department of Biology, King's  
19 College in Wilkes-Barre, Pennsylvania; the Department  
20 of Biology, University of South Florida; the  
21 Department of Chemistry, Villanova University; the  
22 symposium at Wheaton College; Department of  
23 Mathematics at the University of Texas; the Schilling  
24 Lecture on Science and Religion, Department of History  
25 and Religious Studies, Pennsylvania State University;

1 Department of Ecology and Evolutionary Biology,  
2 Princeton University; Department of Chemistry, Colgate  
3 University; Department of Genetics, University of  
4 Georgia; Department of Biochemistry, University of  
5 Minnesota; the Guy F. Lipscomb Lecture, Department of  
6 Chemistry and Biochemistry, University of South  
7 Carolina; panel discussions with Lynn Margulis and  
8 other scholars, University of Massachusetts, Amherst;  
9 Department of Biochemistry at Mayo Clinic; the  
10 Brooklyn section of the American Chemical Society; the  
11 Gordon Research Conference on Organic Reactions and  
12 Processes in New Hampshire; Evolution, Darwinian  
13 Medicine Conference, Royal Society of Medicine in  
14 London; Baylor University, plenary lecture to the  
15 Nature of Nature; University of Aberdeen; Concordia  
16 College; Messiah College; Department of Philosophy at  
17 Wilkes University; American Association for the  
18 Advancement of Science Meeting in Haverford College;  
19 University of New Mexico to the -- it was a special  
20 presentation to the Deans of Medical School; the  
21 Biotechnical Group at Sandia National Laboratories,  
22 Albuquerque, New Mexico; Los Angeles National  
23 Laboratories in Los Alamos -- that was Los Alamos  
24 National Laboratories; American Museum of Natural  
25 History; Cornell University, introductory evolutionary

1 biology class. That was actually the biology class of  
2 Professor William Provine, an ardent evolutionist.  
3 Chestnut Hill College, Philadelphia, Pennsylvania,  
4 undergraduate biochemical lecture; Department of  
5 Biochemistry and Biophysics, University of California;  
6 and the list goes on. You never mention any --

7 MR. ROTHSCHILD: Your Honor, objection. I  
8 just want to be clear, and I'm not suggesting -- I  
9 don't have personal knowledge, but is Mr. Thompson  
10 representing that all of these are presentations on  
11 intelligent design?

12 Because Professor Behe is a biochemist, has  
13 done work in the field of biochemistry separate from  
14 intelligent design, and I just want to make sure  
15 what's being represented here. I don't have personal  
16 knowledge, but I just want to make sure the record is  
17 clear on this point.

18 MR. THOMPSON: My question was, was she  
19 aware of presentations that Dr. Behe had made to  
20 various scientific organizations, because she never  
21 listed any of those.

22 MR. ROTHSCHILD: And my objection stands.

23 THE COURT: Well, you don't know whether  
24 they were about intelligent design or about another  
25 subject?

1 MR. THOMPSON: I don't know that every one  
2 of them were, Your Honor.

3 THE COURT: All right. That clarifies the  
4 question. You can answer the question.

5 THE WITNESS: I'm not -- I don't have  
6 knowledge of every single presentation that he's made,  
7 but I know that some of the presentations that you  
8 talked about were arranged by people who are  
9 sympathetic to his point of view as an intelligent  
10 design proponent.

11 For example, when he spoke of the Nature of  
12 Nature conference at Baylor, that was a conference  
13 that was organized by creationists. It was organized  
14 by members of the Discovery Institute. The Foundation  
15 for Thought and Ethics had a hand in that. That was  
16 not a bona fide scientific meeting.

17 And so these are not, you know -- these are  
18 not presentations in which he would be presenting  
19 intelligent design at a scientific meeting subject to  
20 peer review. He has stated himself that he chooses  
21 not to do that. Dr. Miller has pointed that out  
22 himself.

23 So many of his presentations are really --  
24 they're not strictly scientific meetings. Many of the  
25 talks he gives on university campuses -- and I'm

1 speaking about Dr. Behe -- are arranged by people who  
2 are sympathetic to his point of view, and some of them  
3 are arranged by campus youth ministries. That's a  
4 very frequent sponsor of some of the talks that he  
5 gives. So I'm familiar with some of those, and I do  
6 not agree that he's making strictly scientific  
7 presentations.

8 And from the publications that I found for  
9 Dr. Behe in the scientific databases, not a single one  
10 of those publications that's in a peer-reviewed  
11 scientific journal presents intelligent design as a  
12 biological theory. He simply does not do that kind of  
13 work. And when he was asked at the Baylor conference  
14 about the research in intelligent design, he expressed  
15 the hope that he hoped somebody would eventually do  
16 it. He himself does not do it.

17 BY MR. THOMPSON:

18 Q. The Nature of Nature conference, there were  
19 Darwinists who gave lectures at that conference, were  
20 there not?

21 A. Yes.

22 Q. So they weren't all intelligent design  
23 advocates, were they?

24 A. They were chiefly that, chiefly intelligent  
25 design advocates. There were people representing the

1 evolutionary point of view. That conference was  
2 designed that way by the people who organized it.

3 Q. And, in fact, you were attempting to keep  
4 Darwin evolutionists out of that conference, were you  
5 not?

6 A. No, sir, that is false. And I can explain  
7 that to you, if you wish.

8 Q. I will get into that in a few minutes.  
9 What's interesting, however, is that in your report,  
10 you throw out the comment that "yet he has made  
11 numerous presentations in churches."

12 The question I have for you is, what is the  
13 academic criteria or methodology you use to make the  
14 claim that Dr. Behe gives presentations at churches  
15 but yet leave out those academic presentations I just  
16 mentioned?

17 A. Sir, I am describing his activities. He  
18 does not make scientific presentations using  
19 intelligent design as a biological theory at bona fide  
20 scientific peer-review conferences. He does not do  
21 that. You will not find that reflected in his  
22 professional work.

23 In his professional work as a biochemist, he  
24 himself does not use "intelligent design." He doesn't  
25 use the term. I am reflecting his activities as he

1 has carried them out. I simply did not throw out this  
2 term. This is an accurate statement of what Dr. Behe  
3 chooses to do.

4 Q. And so I'm still trying to understand the  
5 academic methodology or the criteria that you're using  
6 to make a statement that he speaks at churches but  
7 keep out the statements that he has spoken at all  
8 these other conferences that I mentioned. Even though  
9 some of them may not be, you know, dealing with  
10 intelligent design, you just leave totally out of your  
11 report that he does make statements.

12 A. Dr. Behe is discussed extensively in my  
13 book. It is not as though he is totally ignored in my  
14 work. The aspect of this issue that I was asked to  
15 discuss are his activities as an intelligent design  
16 proponent. I am reporting those accurately.

17 He makes numerous presentations. He does  
18 not and has not and has expressed an intention not to  
19 put himself through the process of peer review as  
20 reflected in the statement that is in the Chronicle of  
21 Higher Education. I am simply accurately -- my  
22 methodology is to tell the truth about what he does.

23 Q. Well, I think you misrepresented his quote.  
24 He just said, quote, I just don't think that large  
25 scientific meetings are effective forums for

1 presenting these ideas, not that he is not subjecting  
2 himself to peer review.

3 MR. ROTHSCHILD: Objection, Your Honor.  
4 He's arguing with the witness now.

5 MR. THOMPSON: I'm asking a question. I  
6 don't think it was in an argument form.

7 THE COURT: Well, that was a declarative  
8 statement. That wasn't a question. If you want to  
9 phrase it as a question, you can do that. The  
10 objection is sustained.

11 BY MR. THOMPSON:

12 Q. Isn't it true that all he stated was he just  
13 doesn't think large scientific meetings are effective  
14 forums for presenting his ideas? Isn't that all he  
15 said?

16 A. Sir, this is part of the peer-review  
17 process. Scientists attend meetings -- there are  
18 certain standards of scholarship. It doesn't matter  
19 what your discipline is, you understand these  
20 standards of scholarship. And one of the standards of  
21 scholarship in science is that you submit your ideas  
22 to peer review in a scientific debate. Dr. Behe is  
23 the person who has chosen not to do that, and I am  
24 reflecting that.

25 Q. Would it be an accurate statement that there

1 have been many comments about his book, *Darwin's Black*  
2 *Box*, by scientists?

3 A. Yes, there have been many comments about his  
4 book by scientists.

5 Q. And so scientists can read the book, and  
6 they have printed commentary, criticisms of his  
7 concept of irreducible complexity. Is that true?

8 A. Yes. They are responding to what they  
9 consider an inaccurate portrayal, not only of the  
10 science, but they're also objecting to his espousing  
11 the idea of intelligent design. The fact that  
12 scientists have responded to his work does not make  
13 his work in itself scientific.

14 Q. You just indicated that's a part of the  
15 scientific process, is it not?

16 A. The process of scientific peer review, which  
17 Dr. Behe, as an advocate of what he purports to be a  
18 scientific theory, is to present those ideas before  
19 his scientific peers at meetings to have them  
20 reviewed, to have them critiqued, and then to have  
21 those ideas survive that process so that they can be  
22 presented as scientific ideas in a scientific journal.  
23 Dr. Behe has not done that.

24 Q. You're not saying, I don't think, that all  
25 of these meetings that I mentioned, that there were

1 not scientists there that were critiquing him, were  
2 you?

3 A. I'm sure there were scientists at lots of  
4 these meetings. That does not make these meetings  
5 part of the scientific review process.

6 Q. I guess the question I have to you at this  
7 point with regard to what you put in your report,  
8 don't you think that the way you set that down was a  
9 gross misrepresentation of what Dr. Behe is all about?

10 A. No, sir. It's an accurate representation.

11 Q. In other words, the validity of a particular  
12 scientific concept is based upon the fact that this  
13 proponent goes to church?

14 A. Scientists do not usually defend their ideas  
15 in churches, sir. Dr. Behe does that frequently. If  
16 he had a valid scientific idea to present, he would  
17 find a valid scientific outlet for it. He would  
18 submit it to peer review by his fellow scientists. He  
19 himself has chosen not to do that.

20 Q. Well, do you believe that it would be a  
21 fallacious argument for me to make the statement  
22 Dr. Behe's concept of irreducible complexity is  
23 invalid because he goes to church and makes comments  
24 about that concept?

25 A. I have not said that it's invalid because he

1 does it in churches. Dr. Behe, by his activities, is  
2 reflecting the fact that he has no valid science to  
3 present.

4 Q. Well, again, you are not a scientist, are  
5 you?

6 A. No, I'm not.

7 Q. Okay.

8 A. My coauthor is.

9 Q. And so when you make those kinds of  
10 statements, you are going outside of your bounds of  
11 expertise. Is that correct?

12 A. People who are well acquainted with this  
13 issue and who make an effort to inform themselves  
14 about the current state of the science, which I have  
15 made a great deal of effort to do, understand that if  
16 Dr. Behe had scientific data to present, he could do  
17 that. It's not hard to understand that he hasn't done  
18 it.

19 Q. So my question is, you don't hold yourself  
20 out as an expert in science, do you?

21 A. No, sir, I've never claimed to do that. And  
22 I do not speak to his scientific -- his purported  
23 scientific defenses of irreducible complexity.  
24 Dr. Miller has done that very well.

25 Q. And there is a dispute between Dr. Miller

1 and Dr. Behe about whether Dr. Behe's concept of  
2 irreducible complexity could be explained by natural  
3 selection. Isn't that correct?

4 A. Some of the country's major scientists, a  
5 number of major scientists have critiqued Dr. Behe's  
6 claims. Dr. Miller is not an isolated voice.  
7 Dr. Behe's work has been looked at by many of the most  
8 prominent scientists in the country. They are  
9 unanimous in their rejection of what he has to say.  
10 And irreducible complexity itself is a very old  
11 creationist idea. It is not new.

12 Q. And so basically what you said is a lot of  
13 scientists have looked at Dr. Behe's work and have  
14 critiqued it. Correct?

15 A. They have offered very thoughtful, detailed  
16 criticisms of it to show why he is wrong.

17 Q. Based on scientific principles. Correct?

18 A. Yes.

19 Q. Okay.

20 A. From their standpoint.

21 Q. You are not meaning to suggest that science  
22 is based upon majority vote, are you?

23 A. It's based on a consensus. It's not simply  
24 a vote.

25 Q. Well, would it be accurate to say that many

1 scientific theories that were considered invalid by  
2 the community of science have ultimately become the  
3 consensus of the community of science?

4 A. Could you give me an example, please?

5 Q. The big bang theory.

6 MR. ROTHSCHILD: Objection, Your Honor.

7 We're spending a lot of time asking this witness  
8 questions about science after Mr. Thompson has taken  
9 pains to point out that she's not an expert in that  
10 field, rather than the testimony she's actually given.

11 MR. THOMPSON: Your Honor, the only reason I  
12 ask these questions is because she keeps on making  
13 scientific commentary, and I want to probe as to  
14 exactly where her limits of scientific experience end.

15 THE COURT: Well, she said she's not a  
16 scientist. I'm going to overrule the objection. I'll  
17 allow you some latitude in this area, but I'm not so  
18 sure that this is particularly helpful to me. I will  
19 tell you that. Be guided by that.

20 MR. THOMPSON: I will be guided by that,  
21 Your Honor.

22 THE COURT: I'll give you some latitude.  
23 You can proceed.

24 BY MR. THOMPSON:

25 Q. Just to close up that line of inquiry, the

1 big bang theory was espoused by a French priest,  
2 Belgian French priest. Isn't that correct?

3 A. Yes.

4 Q. And at the time that he propounded that  
5 theory, most of the scientific community thought he  
6 was wrong. Correct?

7 A. That happens.

8 Q. Okay. And, in fact, Einstein, our great  
9 scientist, called him a buffoon. Isn't that correct?

10 A. I'm not familiar with that specific comment,  
11 but if you say so.

12 Q. And ultimately it became the consensus of  
13 the scientific community?

14 A. Because it survived a very rigorous testing  
15 process and it was submitted to review by scientific  
16 peers. That has not happened with intelligent design.

17 Q. Well, science is an ongoing process, is it  
18 not? It starts someplace, and then you have the  
19 critiques that go on?

20 A. Yes. But I would remind you that the  
21 intelligent design strategy has now been in execution  
22 for almost 14 years, and they have presented  
23 absolutely nothing in the way of science to support  
24 their claims.

25 And they have themselves admitted, I might

1 also recall from yesterday, just as recently as August  
2 of last year, Dr. Nelson pointed out, in an interview  
3 which he shared with major leaders of this movement,  
4 that they have no theory of biological design. They  
5 have nothing.

6 Q. We will address that. We did have some  
7 discussion yesterday about Dr. Bill Dembski. Correct?

8 A. Yes, we did.

9 Q. And he is another leader, so-called leader  
10 of the intelligent design movement?

11 A. One of its early founders or early members  
12 of the Wedge strategy.

13 Q. And I recall you did acknowledge that he had  
14 written a book, *The Design Inference*?

15 A. Yes, I believe that was his first book.

16 Q. And that *Design Inference* book is an  
17 academic monograph?

18 A. It was his dissertation.

19 Q. On intelligent design?

20 A. I don't believe so. I have two conflicting  
21 statements from Dr. Dembski on that. When Dr. Dembski  
22 presented testimony in September, 2003, before the  
23 Texas Board of Education, when the Discovery Institute  
24 involved itself in the effort to choose science  
25 textbooks, Dr. Dembski presented to the board a list

1 of works which he said supported intelligent design.  
2 He included his book *The Design Inference* in that  
3 list.

4 But two months before making that list, he  
5 had posted the comment on a Web site that he has that  
6 that book did not address the implications of  
7 biological design. It did not -- he himself wrote  
8 that about his own book, *The Design Inference*.

9 Q. Well, his book was a book on mathematical  
10 probabilities?

11 A. That's part of his work as a mathematician.

12 Q. Right. He's not a biologist, is he?

13 A. He has no formal credentials in science.

14 Q. But you will agree with me then that *The*  
15 *Design Inference* is an academic monograph on  
16 intelligent design based upon Dr. Dembski's  
17 mathematical formulations?

18 A. It depends on what you mean by a monograph  
19 on intelligent design. He himself is giving -- has  
20 given conflicting statements about that.

21 Q. Well, this monograph was published by  
22 Cambridge University Press. Are you aware of that?

23 A. Yes, sir.

24 Q. And it was published as a part of their  
25 monograph series entitled, Cambridge Studies in

1 Probability, Induction and Decision. Are you aware of  
2 that?

3 A. That's correct.

4 Q. A question I have for you is, why was not  
5 his book, *The Design Inference*, mentioned in your  
6 expert report?

7 A. That book lies outside my area of expertise.  
8 I don't have the technical background to evaluate that  
9 book. The most important book that I looked at is the  
10 book in which he explains intelligent design to his  
11 lay audience. And in that book, he explains it in  
12 overtly religious terms. He himself stated, as I just  
13 pointed out, that when he wrote *The Design Inference*,  
14 it did not address the implications of design for  
15 biology.

16 Q. So that if a scientist describes their work  
17 in overtly religious terms, that means the work is  
18 invalid?

19 A. Dr. Dembski has defined intelligent design  
20 as a religious idea. I believe that came out  
21 yesterday. If it's a scientific idea, you certainly  
22 don't define it as the logos theology of John's  
23 Gospel.

24 Q. Would you agree that many scientific  
25 theories have religious implications?

1           A.    Just about anything you could talk about has  
2 religious implications.

3           Q.    So that if a scientist wants to talk about  
4 the religious implications of his or her theory, they  
5 are certainly welcome to do that.  Right?

6           A.    Yes, they are welcome to do that.  But when  
7 you're talking about intelligent design, you're not  
8 talking about something that has religious  
9 implications, you are talking about something which  
10 is, in essence, religious itself.

11                   Intelligent design is essentially a  
12 religious idea.  So it's not merely that we're talking  
13 about a scientific idea with religious implications.  
14 That is not the case.

15           Q.    Well, again, there is some dispute as to  
16 whether intelligent design is a religious concept or  
17 not.  But you will agree that Dr. Behe is doing  
18 biological studies on irreducible complexity as a part  
19 of the intelligent design theory.  Correct?

20           A.    No, sir, he's not doing scientific research  
21 to support that idea.

22           Q.    You don't consider what Dr. Behe has done  
23 with reference to the bacterial flagellum as  
24 scientific research?

25           A.    Dr. Behe wrote a book for the popular

1 audience. That's what *Darwin's Black Box* is. It's a  
2 book for the popular audience.

3 Now, the fact that he talks about science in  
4 that book does not make it a discussion of a genuine  
5 scientific idea. When he gets to the last chapter of  
6 that book, he is actually arguing for supernatural  
7 explanations in science. That is not a genuine  
8 scientific idea.

9 Q. There are Darwinists that do the same thing,  
10 isn't that true, that argue a philosophical or a  
11 religious idea based upon their scientific theories  
12 and understandings?

13 A. Could you tell me who specifically you're  
14 speaking about?

15 Q. Well, yes. Richard Dawkins, who states the  
16 evidence of evolution reveals a universe without  
17 design. Darwin made it possible to be an  
18 intellectually fulfilled atheist. Are those religious  
19 statements by a Darwinist?

20 A. Those are his personal points of view, which  
21 he is certainly fully entitled to express.

22 Q. As is Dr. Behe?

23 A. Yes.

24 Q. As is Dr. Dembski?

25 A. Yes. They are entitled to express their

1 personal points of view. What they are not entitled  
2 to do is have those religious ideas presented in a  
3 science class to children as a scientific theory.

4 Q. Well, that's not the question I asked you.  
5 But it is Richard Dawkins who uses a theory of  
6 evolution to propound what I would say is religious  
7 and philosophical ideas. Is that correct?

8 A. He does. And some people have different  
9 ideas about that, and they express them differently.  
10 He's one voice, and he takes his own point of view.

11 Q. Do you know who Peter Singer is?

12 A. Yes. He's a philosopher.

13 Q. And he is a professor at a university?

14 A. Yes.

15 Q. Have you ever heard this comment from him,  
16 Evolution teaches us that we are animals so that sex  
17 across the species barrier ceases to be an offense to  
18 our status and dignity as human beings? Have you ever  
19 heard him say that?

20 A. I haven't heard that specific comment.

21 Q. Okay. What about Randy Thornhill, do you  
22 know who he is?

23 A. No.

24 Q. Or Craig Palmer?

25 A. Craig Palmer?

1 Q. Yes.

2 A. I'm sorry.

3 Q. Okay. These individuals indicate rape is a  
4 natural biological phenomenon that is a product of  
5 human evolutionary heritage akin to the leopard's  
6 spots and giraffe's elongated neck? Have you ever  
7 heard that?

8 A. No, sir. That's not connected to my work.

9 Q. How about the statement from Steve Weinberg,  
10 and we know -- you discussed Steve Weinberg. You know  
11 who he is. Right?

12 A. Yes.

13 Q. And he said, quote, I personally feel that  
14 the teaching of modern science is corrosive of  
15 religious belief and that I'm all for that. One of  
16 the great things that, in fact, has driven me in my  
17 life is a feeling that this is one of the great social  
18 functions of science to free people from superstition.  
19 Have you heard that?

20 MR. ROTHSCHILD: Objection, Your Honor.  
21 Asked and answered. We're just repeating the same  
22 cross-examination from yesterday.

23 MR. THOMPSON: Your Honor, I'm trying to  
24 help her. She asked for various Darwinist  
25 evolutionary concepts which have led to other

1 philosophical and religious --

2 THE COURT: I'm not sure it was asked in  
3 exactly that form. I'll overrule the objection. You  
4 can answer the question.

5 THE WITNESS: I'm sorry, would you repeat  
6 the last thing? What is your question, sir?

7 BY MR. THOMPSON:

8 Q. This was by Steve Weinberg, the quote by  
9 Steve Weinberg.

10 A. Right.

11 Q. I personally feel that the teaching of  
12 modern science is corrosive of religious belief, and  
13 I'm all for that. One of the great things that, in  
14 fact, has driven me in my life is the feeling that  
15 this is one of the great social functions of science  
16 to free people from superstition. Have you heard that  
17 comment?

18 A. You read it yesterday.

19 Q. Yes. And that is going beyond the actual  
20 theory of evolution to a philosophical or religious  
21 point of view?

22 A. Yes, sir, it's a very uncontroversial fact  
23 that scientists don't always speak purely as  
24 scientists. Those comments are not what won Professor  
25 Weinberg his Nobel Prize. What won him his Nobel

1 Prize was his work in science. Over and above that,  
2 he's free to take any point of view that he chooses.

3 Q. Yesterday I mentioned your claim that  
4 Senator Santorum's amendment was a first step to a  
5 theocratic state, and you asked where that statement  
6 was made. Does that refresh your recollection?

7 A. You indicated that you have --

8 MR. ROTHSCHILD: Objection. That  
9 mischaracterizes the testimony.

10 THE COURT: In what way?

11 MR. ROTHSCHILD: He referred to statements  
12 in her book by Mr. Santorum, and she asked to look at  
13 her book.

14 THE COURT: Well, it might be a distinction  
15 without a difference. She asked to see the statement  
16 in the context of the book. Let's move on.

17 MR. THOMPSON: Let me ask it in a different  
18 way, if I may, Your Honor.

19 BY MR. THOMPSON:

20 Q. Is it your position that Senator Santorum's  
21 amendment, as adopted in the final conference report,  
22 is a first step in a theocratic state?

23 A. Sir, you indicated that you had a letter  
24 that I had written?

25 Q. Forget about the letter right now. I'm

1 asking you the question.

2 A. Senator Santorum cooperated with the  
3 intelligent design proponents. Phillip Johnson  
4 crafted that entry, which was first filed as a sense  
5 of the senate resolution. Senator Santorum is a very  
6 strong supporter of intelligent design. He has chosen  
7 to align himself with their effort.

8 Q. And then my question to you again is, is it  
9 your opinion that that amendment was a first step  
10 toward a theocratic state?

11 A. That amendment is part of the Wedge  
12 strategy, and the Wedge strategy itself is an effort  
13 to overturn everything that they consider to be  
14 detrimental to American society. The Wedge strategy  
15 is very clear, and the Santorum amendment is part of  
16 that. The Wedge strategy is an effort to, as they  
17 say, completely overturn the effects of scientific  
18 materialism on American culture.

19 They have spoken many times, intelligent  
20 design proponents have spoken many times of their  
21 dislike of secular culture, their dislike of secular  
22 education, their dislike of secular government. The  
23 Santorum amendment was part of that effort.

24 Q. So is it your opinion then that the Santorum  
25 amendment was a first step toward a theocratic state?

1           A.    It's a part of the continuing effort to  
2           overturn the secular basis of American culture.  It's  
3           part of the Wedge strategy.

4           Q.    You still haven't answered my question,  
5           Professor Forrest.  Is it your opinion that Senator  
6           Santorum's amendment was a first step toward a  
7           theocratic state?

8           A.    I think it is a step which points in that  
9           direction, yes, sir.

10          Q.    Have you heard a statement by President Bush  
11          in the last several weeks that we should be teaching  
12          intelligent design alongside evolution?

13          A.    Yes.  The statement he made in early August?

14          Q.    Yes.  And do you believe that is also a step  
15          toward a theocratic state?

16          A.    I can't tell you what was in the President's  
17          mind.  I only know what he said.  I am familiar with  
18          what the intelligent design proponents are doing.  I'm  
19          familiar with their strategy.  What the President was  
20          thinking when he made that statement is not -- I'm not  
21          privy to that.

22          Q.    In your book -- and I'm referring to your  
23          book now *Creationism's Trojan Horse* -- you make a  
24          statement, and it's on Page, I believe, 271 in your  
25          book, you make a statement in your book on Page 271,

1 Dobson -- this is in the middle of the page.

2 A. Yes.

3 Q. Referring to James Dobson, Director of Focus  
4 on the Family, Dobson sees America as gravely  
5 threatened by secular humanism.

6 A. I'm sorry, let me find the line.

7 Q. Okay. It's about in the middle of the page.

8 A. I've got it.

9 Q. The sentence is, and I quote, Promoting the  
10 religious right propaganda that church/state  
11 separation is a myth, Dobson sees America as gravely  
12 threatened by secular humanism. Is that an opinion  
13 that you came by that Dobson seems gravely -- said  
14 he's gravely threatened by secular humanism?

15 A. That reflects Dr. Dobson's position as he  
16 himself has explained it.

17 Q. That part, gravely threatened by secular  
18 humanism, is that an opinion of yours, or has he made  
19 that actual statement?

20 A. That reflects his statements, his sentiments  
21 as he has expressed them on many occasions.

22 Q. And you believe Dr. Dobson is a theocratic  
23 extremist. Is that true?

24 A. I believe Dr. Dobson has very extreme views,  
25 yes, I do.

1 Q. And you would characterize him as a  
2 theocratic extremist?

3 A. I would.

4 Q. What about D. James Kennedy, do you know who  
5 he is?

6 A. Certainly. I've written about him.

7 Q. And he is whom?

8 A. He is the founder of Coral Ridge Ministries  
9 in Coral Ridge, Florida.

10 Q. And you also characterized Dr. D. James  
11 Kennedy as another religious right operative?

12 A. Yes.

13 Q. Now, what do you mean by the word  
14 "operative"?

15 A. He's very active in the religious right  
16 effort to undermine secular public education, secular  
17 government. He is very active. I would call him an  
18 activist.

19 Q. And he is also characterized as a theocratic  
20 extremist?

21 A. Yes.

22 Q. Now, in writing your book, *Creationism's*  
23 *Trojan Horse*, how long did it take you?

24 A. Three and a half years.

25 Q. How long after you did your research did you

1 work on the manuscript?

2 A. I did research almost up until the time it  
3 was published. We were adding material almost at the  
4 very last -- for as long as we could.

5 Q. And you had a coauthor, as well?

6 A. Yes, I have a coauthor.

7 Q. How was that -- how did that work? How did  
8 you and the coauthor decide upon the actual final  
9 draft?

10 A. I had a complete draft at one point  
11 containing the research I had done on the intelligent  
12 design movement. When Professor Gross agreed to  
13 become my coauthor, we went back through the entire  
14 draft. He did some extensive additions in terms of  
15 critiquing the scientific claims of the intelligent  
16 design proponents. He and I both went through every  
17 word of every chapter. We both were integrally  
18 involved in reworking my original manuscript, and he  
19 added his scientific critique to it.

20 Q. And how long did that process take where  
21 Dr. Gross became involved in actually going through  
22 the manuscript?

23 A. I'm trying to think exactly when he came on  
24 as the coauthor. We worked for at least two years  
25 together. It was quite a long time.

1 Q. And can you give me an idea how many drafts  
2 you all developed?

3 A. Too many to count.

4 Q. Okay.

5 A. We revised this book many, many times. It's  
6 a product of a great deal of hard work.

7 Q. You are not, in your review of *Pandas and*  
8 *People* and the various drafts that were put up on the  
9 display, you are not suggesting that school boards  
10 must review all the drafts leading up to the final  
11 product before they approve a reference book to put in  
12 their library, are you?

13 A. I'm not suggesting that school boards should  
14 have reviewed drafts of manuscripts before they were  
15 published. Is that your question?

16 Q. The various drafts of manuscripts.

17 A. No, I didn't suggest that.

18 Q. Okay. And you're not suggesting that school  
19 boards should do background investigations on the  
20 religious and political leanings and activities of the  
21 authors of books before they put those books in the  
22 library, are you?

23 A. I didn't suggest that.

24 Q. You have no evidence showing that any member  
25 of the Dover School Board or the Dover School Board

1 administration was aware of the various drafts of  
2 *Pandas and People*, do you?

3 A. No.

4 Q. Did you ever have an opportunity to review  
5 the transcript of the deposition of Jon Buell?

6 A. Yes.

7 Q. He's the FTE founder.

8 A. Yes, I have the transcript.

9 Q. And are you aware that Mr. Buell, under  
10 oath, stated that there was never any contact between  
11 FTE, himself, and any members of the Dover Area School  
12 District or administrators?

13 A. I don't recall that specific part of the  
14 transcript, sir. I'm sure if it's in there, that's  
15 what he said.

16 Q. Well, do you have any evidence at all that  
17 there was any contact between --

18 A. No.

19 Q. -- FTE and Jon Buell and any members of the  
20 Dover Area School Board or the school board  
21 administrators?

22 A. No, I don't have evidence of that.

23 Q. Now, there were several displays put up that  
24 had graphs of word counts. Would you just go through  
25 how you developed those graphs?

1           A.     Those drafts were developed by staff at the  
2 National Center for Science Education.  You're  
3 referring to the word counts in the *Pandas* books, the  
4 various drafts?

5           Q.     Yes, right.

6           A.     There was a firm that I believe was working  
7 with the legal team that provided scans of those  
8 drafts in what is called ASCII text.  That's just  
9 plain, unformatted text.  Based on those drafts, the  
10 word counts were run.

11                    It's very easy to run a word count for a  
12 specific word or a cognate of a word.  The NCSE staff  
13 ran the word count and made the charts, and I  
14 re-created some of the word counts just to see how  
15 they had done it and to verify it.  I got exactly the  
16 same results they did.

17           Q.     Okay.  I've got two graphs that were  
18 prepared, and I'm not sure how I can identify them.  I  
19 guess I can.  One has the -- there are two phrases.  
20 One is "creation" and "design."

21           A.     That was the first graph.

22           Q.     And then there's a second graph that has  
23 "creation" with an IS at the end and "intelligent  
24 design."

25           A.     That was the second one, yes.

1 Q. Now, the graph here on the left side of the  
2 page, and any graph, has -- on either one of the  
3 graphs, I should say, starts from zero at the bottom  
4 and goes up to 300. That's referring to the  
5 "creation" and "design" graph. What do these numbers  
6 mean on the left side of the graph?

7 A. The number of times a word or a cognate  
8 would be used.

9 Q. Okay. Taking the graph that describes  
10 "creation" and "design" word counts, it starts at 150.  
11 Does that mean "creation," which is in red, was used  
12 150 times?

13 A. Is that the first graph you've got where we  
14 were looking for "creation" and then "design"?

15 Q. Correct.

16 A. Yes, it would represent finding that word in  
17 the text about 150 times.

18 MR. ROTHSCHILD: Your Honor, can I suggest  
19 that we put them up on the witness's monitor and on  
20 the screen?

21 MR. THOMPSON: Sure.

22 BY MR. THOMPSON:

23 Q. The top, as I understand it, the top display  
24 is the one that deals with "creation" and "design."  
25 And the word for -- "creation" appeared at the

1 beginning of the graph 150 times?

2 A. That's what -- the graph reflects the actual  
3 word counts.

4 Q. And then the blue line dealing with the word  
5 "design" is just below the 50 line. Is that correct?

6 A. Yes.

7 Q. And the graph goes up and down towards the  
8 last book, *Of Pandas and People*, which is edited or  
9 published in 1993 where -- can you give me the word  
10 count for "creation" in that edition?

11 A. I'm sorry, which one are you -- 1993?

12 Q. Yes, the last one.

13 A. Okay. Well, it shows that it's far fewer  
14 than 50. If you're looking at the far right side of  
15 the graph -- right?

16 Q. Right.

17 A. *Pandas*, 1993?

18 Q. Yes.

19 A. Yes, it's well below 50.

20 Q. And the word "design," how high is that?

21 A. That is -- I'm sorry, it's right here. The  
22 word "design" in the 1993 version is something over  
23 200.

24 Q. Now, how many total words were in *Of Pandas*  
25 *and People*?

1           A.    Oh, sir, I'm sorry, I can't remember the  
2 total number of words.

3           Q.    So we can't really put this in perspective  
4 to the whole book, can we?

5           A.    I think you can. I think what this graph --  
6 what this graph is intended to show is the sharp  
7 decline in the use of the term "creation" in the  
8 second, 1987 draft and the steep rise in the  
9 substitution of the term "design" for that word.  
10 That's what the graph is designed to show.

11          Q.    So that you cannot tell the Court how many  
12 actual words there were in *Of Pandas and People*?

13          A.    No. The total word count? No, sir, I don't  
14 remember that.

15          Q.    So that it could possibly be that even if  
16 you go to 200 words of "design" in the last book, it  
17 might be miniscule compared to the number of words in  
18 that edition. Correct?

19          A.    That's not a very long book. That book is  
20 probably less than 200 pages. It's quite a short  
21 book, actually.

22          Q.    But please answer my question. You can't  
23 really determine the relative importance of that word  
24 unless you had the total word count?

25          A.    What's important about this graph is not the

1 total word count of the book, but the use of the word  
2 "creation" as opposed to the word "design." That's  
3 what the graph is designed to show.

4 What the graph is designed to show is that  
5 the word "design" was substituted for the word  
6 "creation," as you can see in the sharp decline in the  
7 use of the word "creation" and the sharp rise in the  
8 use of the word "design."

9 Q. Do you believe that it would have been  
10 appropriate academically to list the number of words  
11 in each edition?

12 A. Typically, in editions of textbooks, people  
13 are not concerned about the total number of words in  
14 the book, if I understood your question correctly.

15 Q. Well, maybe let me rephrase it. To get an  
16 idea of how important 200 times "design" was used, one  
17 should have an idea of how many total words there were  
18 in the book. Isn't that accurate?

19 A. In a book that short, which has only about  
20 six chapters and they're not that long, I think you're  
21 looking at significant word counts with respect to the  
22 word "creation" and the word "design." In a book that  
23 short, I think these findings are significant. The  
24 words were used pervasively throughout the book.

25 Q. Well, "significant" is a subjective opinion.

1 Is that right?

2 A. "Significant" is not at mathematically  
3 precise word.

4 Q. Right. And so it would have been more  
5 mathematically accurate to at least give us the total  
6 word count in each edition of *Pandas and People*?

7 A. I'm sure we could provide that information  
8 if you wish. What is significant about this graph and  
9 the work that we did is that it shows very clearly  
10 that a word substitution was made, that the term  
11 "creation" was changed to the term "design." Not  
12 only -- a visual inspection reveals that quite  
13 clearly. This simply quantifies what we learned  
14 through visual inspection. A deliberate change was  
15 made.

16 Q. Would you consider Darwin's *Origin of*  
17 *Species* a scientific book?

18 A. Yes.

19 Q. You agree that it does have all kinds of  
20 references in it to intelligent design -- excuse me,  
21 to "design" in the book?

22 A. It refers to "special creation."

23 Q. And it talks about the Creator?

24 A. There is a reference near the end of the  
25 book in one edition to that, yes.

1           Q.    And would you think that by referring to  
2 "design" and the "Creator," that that makes the *Origin*  
3 *of Species* a religious book?

4           A.    No, it doesn't make it a religious book.  
5 You have to look at what Darwin was doing. The  
6 prevailing explanation up until Darwin was that the  
7 data in the geological record, for example, was --  
8 reflected the work of a supernatural creator. That  
9 was the prevailing explanation.

10           Now, in order to make his case, Darwin had  
11 to mention the prevailing explanation. He simply had  
12 to because it was the one that he was arguing -- that  
13 he was presenting evidence to show that his  
14 explanation works better.

15           It's not a surprise that he would  
16 incorporate mentions of special creation in his book  
17 because he's arguing that this cannot be a scientific  
18 explanation that accounts for what we see. It's not  
19 surprising that he would talk about it.

20           Q.    What about the breath of the Creator?  
21 That's a religious term.

22           A.    If you know the background of Darwin's  
23 writing of that book, you know that Darwin was very  
24 concerned about the effect of that book on the  
25 religious sensibilities of people about whom he cared

1 quite deeply. He was very respectful of that.

2 He added that as a gesture of respect to the  
3 idea that some people believed that. Darwin himself  
4 did not believe that the origin of life was a question  
5 that he could answer, and he never addressed it. It  
6 was made as a nod to the religious sensibilities of  
7 some of his readers.

8 Q. Would you object if Darwin's *Origin of*  
9 *Species* was placed in a school library?

10 A. I would not.

11 Q. And reference was made to it in a  
12 curriculum?

13 A. I would not.

14 Q. Even though it did have that nod to religion  
15 in it?

16 A. I would not object.

17 Q. Okay. Darwin also wrote the book *Descent of*  
18 *Man*, I believe it was.

19 A. Yes.

20 Q. And what was that book about?

21 A. That is a book in which he applies his ideas  
22 about natural selection to the human species. He does  
23 not do that in the *Origin of Species*.

24 Q. That book also has some  
25 philosophical -- strike that. You teach a course on

1 critical thinking?

2 A. I do.

3 Q. And what do you discuss in that course?

4 What are the major topics?

5 A. I'm sorry, I didn't hear the last part of  
6 your question.

7 Q. What are the major topics? What do you  
8 discuss in that course?

9 A. That's a course in which students learn the  
10 basics of logic, the difference between deductive  
11 arguments and inductive arguments. They learn about  
12 the different types of propositions that can be used  
13 in arguments. They learn about the logical fallacies.  
14 They do a good deal of exercises learning those  
15 thinking skills.

16 Q. Would it be a logical fallacy to hold that a  
17 particular scientific theory is invalid because of the  
18 religious motivations of its proponents?

19 A. A scientific theory is not invalid simply  
20 because people have religious motivations in their  
21 work.

22 Q. Would you believe it's a logical fallacy to  
23 hold that a particular scientific theory is invalid  
24 because of the religious affiliation of its  
25 proponents?

1 A. Certainly not.

2 Q. Now, as I recall, you also use in your --  
3 one of your course of studies, I don't know if it's  
4 the critical thinking course, but the Appleman reader,  
5 Darwin's Appleman reader?

6 A. Philip Appleman is the editor of the Norton  
7 Critical Edition of Darwin, that's correct.

8 Q. And what course did you use that for?

9 A. That's in my graduate seminar in the History  
10 of Western Thought.

11 Q. And how do you use that book?

12 A. My graduate students read the excerpts in  
13 that book from the *Origin of Species*, from *The Descent*  
14 *of Man*, and they read some of the critical essays in  
15 the back.

16 Q. And one of the critical essays they read is  
17 *Darwin's Black Box* by Michael Behe?

18 A. There's an excerpt, yes.

19 Q. And that is to give them a critical view of  
20 Darwin's theory of evolution?

21 A. Those essays are included to show that  
22 creationists have made various objections to the  
23 theory of evolution. Mr. Appleman is trying to give a  
24 full panoply of the responses to Darwin's theory.

25 Q. Does he actually use the purpose of Darwin's

1 theory -- the purpose of Michael Behe's *Black Box* is  
2 to show what creationists think?

3 A. It's in a section in which various -- there  
4 are various responses to that. I believe it's in the  
5 same section as Eugenie Scott's response, and it is  
6 part of the section that deals with creationist  
7 objections.

8 Q. But he doesn't call Dr. Behe a creationist,  
9 does he?

10 A. Mr. Appleman?

11 Q. Yes.

12 A. He doesn't call Dr. Behe a creationist in  
13 that book.

14 Q. Do you think that that is a valuable book  
15 for the education of your students?

16 A. It's valuable in that it shows that there  
17 have been nonscientific objections to evolutionary  
18 theory. It's valuable in that it shows something of  
19 the history of the creationist effort in the United  
20 States, the responses to Darwin's theory.

21 Q. Do you have any idea why they would pick  
22 Darwin's -- excuse me, Michael Behe's *Darwin's Black*  
23 *Box* to do that?

24 A. To show the full nature of the creationist  
25 response. I think that it's intended to be

1 represented as part of creationists' objections to  
2 Darwin's theories.

3 Q. Well, isn't it true that the part that he  
4 picks deals with Dr. Behe's concept of irreducible  
5 complexity?

6 A. That's true.

7 Q. Now, is it necessary for a scientist to  
8 develop a scientific theory by doing lab work?

9 A. That's part of science. There are certain  
10 areas of science in which that is appropriate.

11 Q. Is it necessary to a scientific theory that  
12 the theory's proponent himself do lab work?

13 A. I should think that if a person purports to  
14 have a scientific theory, that person would be closely  
15 involved in whatever research is necessary to  
16 substantiate that claim.

17 Q. Well, there are various ways of -- I'm not  
18 sure what you mean by "closely involved."

19 A. Doing research.

20 Q. Doing the research. So a theory is only  
21 valid if the proponent of the theory himself does the  
22 research?

23 A. I should think that if a person is a  
24 proponent of a theory in the way that Dr. Behe claims  
25 to be, he would be in the front line of the research,

1 he would be involved in it himself.

2 Q. I'm not sure if you answered my question.  
3 Is it yes or --

4 A. I'm sorry, that's what I thought you were  
5 getting at.

6 Q. Well, just please answer my question. Do  
7 you believe that the proponent of a theory has to  
8 actually do the lab research for that theory to be  
9 valid?

10 A. If a person is a proponent of a scientific  
11 theory, that person should be engaged in whatever  
12 research is appropriate to the establishment of that  
13 theory, whatever it might be. It might not  
14 necessarily be working in a laboratory. It might be  
15 something else. There's fieldwork, for example,  
16 that's involved.

17 Q. What about reading peer-review articles,  
18 could that be sufficient for a valid scientific  
19 theory?

20 A. No, sir. Reading peer-reviewed articles is  
21 not doing research. Reading peer-reviewed articles is  
22 reviewing the research. It's not the first line of  
23 science, which is to produce the data. If you're  
24 doing -- if you are doing scientific research, you are  
25 producing data.

1 Q. So that failure to do scientific research on  
2 a particular theory that a scientist propounds makes  
3 that theory invalid?

4 A. Failure to produce any data at all for what  
5 is presented as a scientific theory indicates that you  
6 don't have a theory.

7 Q. Well, will you agree that Albert Einstein  
8 developed the theory of relativity?

9 A. May I make a distinction here just for the  
10 sake of precision?

11 Q. Sure.

12 A. There is a difference -- a theory is  
13 well-established science. It is something that's far  
14 beyond the stage of initial research. When you  
15 propose an idea in science that is in its preliminary  
16 stages of research, what you have is a hypothesis.  
17 And by the time you call something a theory in  
18 science, it is far beyond that stage. It means that  
19 it is a very well-confirmed scientific explanation.

20 So when a person purports to have a  
21 scientific theory, if he's using the term accurately,  
22 then the research has, by and large, already been  
23 done. It may still be ongoing, just as research in  
24 evolutionary biology is ongoing.

25 But the fact that evolutionary theory is

1 called a theory means that it is already established  
2 with abundant and consistent research as a scientific  
3 explanation. It's not hypothetical by that stage.

4 Q. There are different -- you will agree that  
5 there are different definitions of theory?

6 A. In science, there's one, and that is that it  
7 is an explanation that has been confirmed.

8 Q. There are scientists who have what they call  
9 theories that they are just trying to do the research  
10 on. They have a theory that this may be an  
11 explanation of certain empirical data, and they call  
12 it a theory, but it is not the same definition of  
13 "theory" as I understand that you're using.

14 A. The way you're using it is very imprecise.  
15 It's maybe the layman's use of the term "theory."  
16 Laymen typically don't understand theory in the  
17 scientific sense.

18 If you are talking about a scientific theory  
19 in the precise sense in which it is used in science,  
20 you are talking about a confirmed hypothesis, a  
21 well-established, well-founded explanation, which is  
22 not likely to change. It's conceivable that it could,  
23 but it's not likely to.

24 Q. Well, you will agree that Albert Einstein  
25 developed the theory of relativity?

1 A. That's how it's referred to.

2 Q. And at the time he did that, he did not have  
3 a lab, did he?

4 A. I believe he did a great deal of theoretical  
5 work, as he was a theoretical physicist.

6 Q. In fact, he was a clerk in the patent  
7 office, was he not?

8 A. He was, he was.

9 Q. And so he was just looking at the data that  
10 was already there and developed an explanation for  
11 that data. Isn't that correct?

12 A. But Einstein worked in close association  
13 with a great many other people. He didn't just sit in  
14 isolation in the customs office or wherever he worked.  
15 He worked in close association with people who were  
16 integrally involved in scientific research. What  
17 Dr. Einstein did, as I understand it, was theoretical  
18 physics. There are different areas of physics.

19 Q. Are you aware of Francis Crick and James  
20 Watson as the co-discoverers of the famous double  
21 helix DNA molecule?

22 A. Yes.

23 Q. They basically looked at all the research  
24 that was already there. Isn't that correct?

25 A. I believe that they were also involved in

1 the production of a great deal of research, too,  
2 themselves.

3 Q. Is it your understanding that they developed  
4 or, quote, discovered the architecture of the double  
5 helix DNA molecule --

6 A. Yes.

7 Q. -- without doing independent research?

8 A. Sir, I can't give you the specifics of what  
9 they did. Those two gentlemen were both scientists.  
10 They were both, during their lifetimes, very heavily  
11 involved in scientific research. I can't give you the  
12 specifics of their exact work on that particular area.

13 Q. Well, would you agree that it's a  
14 standard -- and maybe you don't have the expertise to  
15 give this opinion -- but it's a standard scientific  
16 practice for scientists to point to the scientific  
17 literature that already exists, to point to  
18 experiments and observations that have already been  
19 reported on and have been done by other people, and to  
20 cite that evidence to bolster their arguments in a  
21 particular theory?

22 A. That is part of what scientists do. The  
23 review of the scientific literature is certainly not,  
24 you know, what all scientists do. All people who are  
25 bona fide practitioners of science are involved in the

1 production of data. In addition to that, they review  
2 the literature of their scientific peers which  
3 presents their data.

4 So all of this peer-reviewed literature must  
5 be tied to the production of original data. The  
6 literature is not free-floating. It is tied to data.  
7 And scientists who do research produce data, and they  
8 share it with each other. That is the significance of  
9 the peer-reviewed literature. It's the sharing of the  
10 data.

11 Q. Correct. And sometimes a scientist will  
12 come up with a theory, an explanation of data based  
13 upon the literature that already exists. Is that  
14 correct?

15 A. That's part of the process, as I understand  
16 it.

17 Q. So you would answer yes. Okay. In your  
18 report, you discuss the compromise strategy of the  
19 Discovery Institute. Do you recall that in your  
20 report?

21 A. Could you point me to it?

22 Q. I'll try to find it here.

23 A. Point it to me, please.

24 THE COURT: All right, let's do this. While  
25 Mr. Thompson is looking for that -- Mr. Thompson,

1 we've been on this witness awhile. I'm going to take  
2 a break. At this point we'll take our morning break,  
3 and we'll return. But I would expect you'll soon be  
4 out of this witness when we return. In an effort to  
5 keep moving here, we're going to have to move on.  
6 Your cross has exceeded the time of the direct  
7 examination. Now, certainly that doesn't mean that  
8 you can't exercise your right to have some more  
9 cross-examination, but let's move out of the witness  
10 fairly promptly after we return.

11 So we'll take our morning break at this  
12 point. We'll return and complete the  
13 cross-examination. We'll hear any redirect at that  
14 time. We'll be in recess.

15 MR. THOMPSON: Thank you, Your Honor.

16 (Recess taken.)

17 THE COURT: You may proceed, Mr. Thompson.

18 MR. THOMPSON: Thank you, Your Honor.

19 BY MR. THOMPSON:

20 Q. Dr. Forrest, I'd like to focus your  
21 attention on Page 38 of your report, your expert  
22 report.

23 A. 38 of the report?

24 Q. Yes.

25 A. Okay.

1 Q. If you can read to yourself that first  
2 paragraph or parts of it to familiarize yourself with  
3 the compromise strategy.

4 A. Just the first paragraph?

5 Q. Read as much as you want to familiarize  
6 yourself with the so-called compromise strategy.

7 A. Okay. Just give me another minute.

8 Q. Sure.

9 A. Okay.

10 Q. In your expert report on Page 38, you refer  
11 to the so-called compromise strategy. Is that  
12 correct?

13 A. That's part of a quote I've used.

14 Q. Right. What is the compromise strategy?

15 A. Compromise strategy refers to the efforts in  
16 the State of Ohio. The initial efforts were to  
17 introduce intelligent design into the state science  
18 standards. When the effort to do that, in which the  
19 Discovery Institute was involved, by the way, with  
20 some Ohio supporters, when that effort ran into  
21 opposition, they changed their strategy so that rather  
22 than asking for intelligent design to be in the  
23 science standards, they simply asked that teachers be  
24 permitted to teach or discuss the controversy. That  
25 was the compromise.

1 Q. Do you think that the Discovery Institute  
2 tried to employ that strategy in this case?

3 A. In the Dover case?

4 Q. Yes.

5 A. I think that the -- first of all, I'm not  
6 exactly sure what you're asking me --

7 MR. ROTHSCHILD: Your Honor --

8 THE WITNESS: -- or how specific I need to  
9 be.

10 THE COURT: Wait. Hold on, ma'am.

11 THE WITNESS: I'm sorry.

12 MR. ROTHSCHILD: The question lacks  
13 foundation. I'm not sure what facts Mr. Thompson is  
14 referring to.

15 THE COURT: Well, the question was did she  
16 think that the Discovery Institute was employing that  
17 tactic in this case. How does that lack foundation?

18 MR. ROTHSCHILD: There's no foundation for  
19 this witness about what the Discovery Institute did or  
20 didn't do in this case. I'm not sure what he's  
21 referring to. I mean, there's the Discovery Institute  
22 large and their activities nationally, but I'm not  
23 sure if Mr. Thompson is referring to something they've  
24 done locally.

25 THE COURT: Well, the clarification

1 subsequently was, in the Dover case, and he said, yes,  
2 in the Dover case. So the question is specific to  
3 Dover, as I understand it. Do you understand it to be  
4 that?

5 THE WITNESS: May I ask for a clarification?

6 THE COURT: You may.

7 THE WITNESS: I would like to have one.

8 THE COURT: You may.

9 THE WITNESS: Are you asking me if the  
10 Discovery Institute is working with the Dover board?  
11 Is that part of your --

12 BY MR. THOMPSON:

13 Q. No. Maybe I should rephrase it then. You  
14 mentioned what the compromise strategy was. Correct?

15 A. In Ohio.

16 Q. In Ohio. And you then referred to some  
17 quotes that Stephen Meyer made regarding the Dover  
18 School Board. There's a quote right in that  
19 paragraph.

20 A. Yes, that's correct.

21 Q. And I'm asking you, was the compromise  
22 strategy attempted in the Dover School Board case of  
23 the curriculum change?

24 MR. ROTHSCHILD: Objection, Your Honor.

25 It's still not clear what Mr. Thompson is asking,

1 whether he's asking about Discovery Institute  
2 involvement specifically with this board, with this  
3 community, or whether he's just talking about, you  
4 know, the Discovery Institute in the air.

5 MR. THOMPSON: Your Honor, I'm referring to  
6 what she said in her report, Page 38 of her report  
7 where she discusses the compromise strategy and then  
8 makes some statements about whether it was being  
9 applied by Discovery or attempted to be applied by  
10 Discovery in --

11 THE COURT: So is the question whether the  
12 compromise strategy, as referenced on Page 38 of the  
13 expert report, was employed by the Discovery Institute  
14 in this case?

15 MR. THOMPSON: Yes, Your Honor.

16 THE COURT: Well, there we said it. There's  
17 the question.

18 THE WITNESS: Yes. Now I can address it,  
19 because I don't think we're talking about the same  
20 thing in each instance.

21 In the Ohio case, representatives of the  
22 Discovery Institute were working, they were publicly  
23 involved and they were working with supporters in  
24 Ohio, a couple of whom are on the Ohio Board of  
25 Education, and they were working together to try to

1 promote intelligent design, to get it included into  
2 the science standards. When they encountered  
3 opposition, they changed their strategy. That's what  
4 happened in Ohio.

5 What I see happening with respect to Dover  
6 is that the Discovery Institute, regardless of what  
7 the Dover board may be doing or not doing, they are  
8 also trying to adjust their position strategically so  
9 as to -- I've seen them say some different things at  
10 different times.

11 What I'm referring to outside the quote --  
12 there's the quote that refers to the compromise  
13 strategy that was devised in Ohio. What I'm referring  
14 to subsequent to that quote, in the lines just after  
15 it, are to the very typical strategic shifts that the  
16 Discovery Institute makes in the way they express  
17 their position. That is something that they have a  
18 habit of doing. And I think they have done that in  
19 this case.

20 BY MR. THOMPSON:

21 Q. I think that answers the question. Thank  
22 you, Professor Forrest. In your testimony, you place  
23 a great deal of emphasis on peer review. Is that  
24 correct?

25 A. Yes, because the scientific community places

1 a great deal of emphasis on that.

2 Q. And based upon your research, is it accurate  
3 to say that peer review has sometimes been used to  
4 obstruct the advancement of valid scientific ideas?

5 A. If I could get you to clarify what you mean  
6 by "obstruct."

7 Q. Prevent the scientific idea from gaining  
8 acceptance.

9 A. What the peer-review process is designed to  
10 do is to make distinctions, distinctions between  
11 scientific claims that are well-founded and scientific  
12 claims that are not. And so there are inevitably --  
13 and I have scientist friends who have experienced  
14 this. Every scientist who submits materials for peer  
15 review gets rejections. So if you're referring to  
16 that, that's a very common practice.

17 Q. Well, one of the famous cases, I guess, is  
18 Gregor Mendel and his theory of genetics?

19 A. Gregor Mendel the monk?

20 Q. Yeah. Are you familiar with what happened  
21 there with his theory?

22 A. Not as it refers to -- not as it refers to  
23 obstructing publication. I'm not sure what you're  
24 getting at.

25 Q. Well, he had this theory and he gave it to a

1 botanist to review, and it sat there for 40 years.

2 Right?

3 A. Well, the case with Mendel is, I don't think  
4 anybody recognized the significance of his research at  
5 the time. It wasn't until well after the turn of the  
6 century that people understood the importance of his  
7 work. I don't think anybody was deliberately trying  
8 to obstruct his work for conspiratorial purposes. It  
9 was just that -- even Darwin didn't understand the  
10 significance of it. It took a little while.

11 Q. Now, we mentioned a letter that you had  
12 written to the House of Representatives and the Senate  
13 regarding the Santorum amendment. Do you recall that?

14 A. Yes. You said you have a copy.

15 Q. Yes.

16 MR. THOMPSON: May I approach the bench,  
17 Your Honor?

18 THE COURT: You may, the witness.

19 MR. THOMPSON: The witness.

20 THE COURT: Yes.

21 MR. ROTHSCHILD: Mr. Thompson, can we have a  
22 copy?

23 THE WITNESS: This is not a copy of the  
24 letter, sir.

25 BY MR. THOMPSON:

1 Q. Isn't that the letter?

2 A. A copy of -- Oh, oh, okay. I see. This is  
3 the letter with a number of signatories, yes.

4 Q. Yes.

5 A. Yes, yes, I'm sorry. Yes, I do recall this.  
6 This was not a letter I wrote.

7 Q. You are a signatory to that?

8 A. I'm a signatory to this, yes.

9 Q. Does that refresh your recollection?

10 A. Yes. Without being able to read it word for  
11 word, I do recall this letter being written.

12 MR. ROTHSCHILD: Your Honor, may counsel  
13 have a copy?

14 THE WITNESS: And could I keep a copy?

15 THE COURT: If they're going to ask you  
16 questions, if he's going to ask you questions, you're  
17 certainly entitled to a copy. Let's let  
18 Mr. Rothschild look at it first.

19 MR. ROTHSCHILD: Just give me a moment, Your  
20 Honor.

21 THE COURT: Certainly.

22 BY MR. THOMPSON:

23 Q. This letter was dated -- strike that. This  
24 letter was signed by several individuals in the  
25 scientific community.

1           A.     Excuse me, are you going to question me  
2 about the letter? If you are, I'd like to have a  
3 copy, please.

4           THE COURT: You can approach the witness,  
5 and if there's something that --

6           MR. THOMPSON: It's going to be pretty  
7 general, Your Honor.

8           THE COURT: Well, if you need it to ask  
9 questions, you can stand near the box. You can look  
10 on it, and then you can give it to the witness if you  
11 only have one copy.

12          THE WITNESS: May I have just a moment to  
13 review it?

14          MR. THOMPSON: Sure.

15          THE WITNESS: Okay.

16 BY MR. THOMPSON:

17          Q.     This letter, as I indicated, was sent as a  
18 joint letter from scientific and educational leaders  
19 to the Senate and to the House of Representatives.

20          A.     I believe it was sent to the conference  
21 committee. Representative Boehner was one.

22          Q.     It was Honorable Edward M. Kennedy,  
23 Chairman?

24          A.     Yes, conference committee.

25          Q.     And then the Honorable John Boehner,

1 Chairman. One from the House of Representatives and  
2 one from the Senate?

3 A. That's correct. I think his name is  
4 pronounced Boehner, but I'm not sure.

5 Q. And the purpose of that letter was to try to  
6 prevent adoption of the Santorum amendment. Is that  
7 correct?

8 A. That's correct.

9 Q. Now, there was another letter you sent to  
10 Simon Blackburn. Do you remember that letter?

11 A. I do.

12 Q. And that was a letter to a particular  
13 participant or potential participant in this  
14 conference that was going to be put on by Bill  
15 Dembski. Is that correct?

16 A. The Nature of Nature conference at Baylor.

17 Q. Right. And do you remember why you wrote  
18 that letter to Mr. Blackburn?

19 A. Yes. I wrote the letter as a professional  
20 courtesy to a fellow philosopher to inform him of the  
21 nature of the event in which he would be  
22 participating.

23 At that particular time people did not  
24 realize that this was a conference that had been  
25 organized by creationists. And I thought, as a member

1 of Professor Blackburn's discipline, having the  
2 knowledge of what this event was about, as a  
3 professional courtesy, I would make him aware of that.

4 Q. And your purpose of doing that was to in  
5 some way persuade him not to attend?

6 A. No. Did you read the letter, sir?

7 Q. Yes, I did.

8 A. Okay. In that letter, I specifically say,  
9 my purpose is not to persuade you not to go because I  
10 understand that you are already committed. It  
11 specifically says that.

12 Q. But you ask him or invite him to talk to  
13 other people about it?

14 A. Yes. I didn't want him just to take my word  
15 for what was in the letter. The thing that was proper  
16 to do is to refer him to other people who could  
17 corroborate what I was telling him.

18 Q. Do you know if he did attend that  
19 conference?

20 A. He did not attend. He declined to attend.

21 Q. Was part of the reason for his declination  
22 the fact that he received this information from you?

23 A. Yes. It was the fact that he had read the  
24 letter. May I give you more information about that?

25 Q. I'm trying to speed it up. Your attorney

1 can ask it.

2 A. There's a bit more to the story.

3 Q. If it's not a complete answer, certainly you  
4 should give a complete answer.

5 A. Dr. Dembski acquired a copy of that letter  
6 and, without my permission, posted it on his Web site.  
7 Accusations were made that I had persuaded -- that I  
8 had written to a number of people persuading -- asking  
9 them to jump ship and not to go to the conference.  
10 That accusation does not reflect the contents of the  
11 letter. So I would like to clarify that.

12 Q. There were other attempts to -- there were  
13 attempts from other evolutionists to contact potential  
14 attendees at that conference?

15 A. I know what I did. I don't know what other  
16 people did.

17 Q. Now, you claimed in your direct testimony  
18 that you did some kind of a Medline search on the  
19 issue of intelligent design to see if there were any  
20 peer-review articles out there?

21 A. Yes, I did that several times.

22 Q. And I believe you gave us the phrase that  
23 you did the search on?

24 A. No, I said I did a key word search and a  
25 subject search.

1 Q. What was the key word search?

2 A. I was working with the reference librarian  
3 at the library where I teach, and we used a variety of  
4 key words. We used intelligent design, design theory,  
5 all of the variations of that.

6 Q. And you claim that you did not find any  
7 peer-review articles?

8 A. There were none.

9 Q. You did not find the article by Behe and  
10 Simon about simulating evolution by gene duplication  
11 of protein features that require multiple amino acid  
12 residues?

13 A. I found a number of articles by Professor  
14 Behe, but they were not articles that used intelligent  
15 design as a biological theory. He has done some bona  
16 fide scientific work.

17 Q. That was in protein science in 2004?

18 A. That was a recently published article that  
19 came out since I've done my work and my research. I'm  
20 aware of that article.

21 Q. Are you aware of a peer-review article by  
22 Chiu, C-h-i-u, and Lui, L-u-i, entitled, Integrated  
23 Use of Multiple Inter -- excuse me, Use of Multiple  
24 Interdependent Patterns for Biomolecular Sequence  
25 Analysis?

1 A. I believe I ran across that one.

2 Q. Okay.

3 THE COURT: Easy for you to say.

4 BY MR. THOMPSON:

5 Q. But you did not mean to reference it in your  
6 report?

7 A. Excuse me?

8 Q. You didn't reference it in your report?

9 A. This is one of a number of publications that  
10 intelligent design proponents have claimed support  
11 intelligent design. They have all been reviewed by  
12 qualified scientists, and I'm aware of that fact and  
13 I'm aware of their findings that these articles do not  
14 actually support intelligent design theory.

15 Intelligent design theory is based on the  
16 supernatural, and so it's not likely that you'll have  
17 scientific evidence that will support that.

18 Q. Well, whether it's based on supernatural is  
19 an issue that we have in dispute. But you did not  
20 find that article when you did your peer-review  
21 search?

22 A. That article was not out yet, I don't think.

23 Q. What about Thornhill and Ussery, A  
24 Classification of Possible Routes of Darwinian  
25 Evolution?

1           A.    Yes.  That's by Dr. David Ussery and Dr.  
2 Thornhill, yes.

3           Q.    And that was devoted to analyzing Dr. Behe's  
4 concept of irreducible complexity?

5           A.    They were responding to Dr. Behe's claims  
6 about that.

7           Q.    And so that would be a yes to my question?

8           MR. ROTHSCHILD:  A yes to what?

9           THE WITNESS:  I'm sorry, what --

10          BY MR. THOMPSON:

11           Q.    The question was, they were responding to  
12 analyzing Dr. Behe's concept of irreducible  
13 complexity?

14           A.    Yes, that's what they were doing, yes.

15           Q.    Okay.  And did you come across two articles  
16 by Douglas Axe appearing in the Journal of Molecular  
17 Biology?

18           A.    I did.

19           Q.    One was Extreme Functionality -- excuse me,  
20 Extreme Functional Sensitivity to Conservative Amino  
21 Acid Changes on Enzyme Exteriors?

22           A.    Yes.  In fact, I e-mailed Dr. Axe to find  
23 out his position on whether those articles support  
24 intelligent design theory.

25           Q.    And did you find an article by Douglas Axe

1 entitled, Estimating the Prevalence of Protein  
2 Sequences Adopting Functional Enzyme Folds?

3 A. Yes. I found essentially all of Dr. Axe's  
4 publications.

5 Q. And so those intelligent design scientists  
6 have been writing in peer-review magazines, have they  
7 not?

8 A. Those are not --

9 MR. ROTHSCHILD: Objection.  
10 Mischaracterizes -- it's an improper question. It  
11 lacks foundation. He's characterizing them as  
12 intelligent design scientists. I think Dr. Forrest is  
13 testifying there's nothing about intelligent design in  
14 those articles.

15 MR. THOMPSON: That wasn't my question, Your  
16 Honor. My question, those intelligent design  
17 scientists.

18 THE COURT: Well, you characterized them as  
19 intelligent design scientists, and Mr. Rothschild's  
20 objection is that they're not intelligent design  
21 scientists, all of them, at least.

22 MR. THOMPSON: Okay.

23 THE COURT: So I think the question in that  
24 sense needs to be rephrased.

25 MR. THOMPSON: I can change it, Your Honor.

1 THE COURT: I'll sustain the objection.

2 BY MR. THOMPSON:

3 Q. Those scientists that I just mentioned have  
4 been publishing in peer-review magazines. Is that  
5 correct?

6 A. They publish their legitimate scientific  
7 research data in peer-review magazines -- I'm sorry  
8 peer-review journals. Those are not articles that  
9 support intelligent design theory.

10 Dr. Axe's work, as I understand it, as my  
11 coauthor has reviewed and evaluated it, it's perfectly  
12 solid scientific work. There's nothing in it that  
13 supports intelligent design theory. And Dr. Axe  
14 himself declined to say that it did when I  
15 specifically asked him to do that or what was his  
16 position.

17 Q. Are you familiar with instances where peer  
18 review has been used to obstruct advancement of the  
19 intelligent design theorists?

20 A. I would not put it in your terms, but I'm  
21 aware of cases in which articles have been declined  
22 through the --

23 Q. Excuse me? I didn't hear that.

24 A. I'm aware of instances in which articles  
25 reportedly have been declined through the peer-review

1 process, but I'm not sure that I would put it in  
2 exactly the terms that you just did.

3 Q. So there have been instances where articles  
4 submitted by intelligent design theorists have been  
5 declined from publication in peer-review journals?

6 A. Dr. Behe has submitted articles which were  
7 declined because they don't produce any data, did not  
8 produce any data to support intelligent design. What  
9 he typically writes is responses to his critics, which  
10 is not the same thing as a peer-reviewed science  
11 article.

12 Q. Are you familiar with instances where  
13 persons who have advanced intelligent design theory  
14 have been retaliated against by the scientific  
15 community?

16 A. No, sir, I'm not.

17 Q. Are you familiar with the instance involving  
18 a biologist by the name of Richard -- or  
19 Dr. Sternberg?

20 A. I'm familiar with the instance in which  
21 Dr. Sternberg published an article in the journal of  
22 which he was editor, the Dr. Meyer's article. I'm  
23 familiar with that.

24 Q. Right. And Richard Sternberg is a trained  
25 evolutionary biologist. Are you familiar with that?

1           A.    Yes.  He's also a member of a creationist  
2 organization.

3           Q.    And he was an editor of the peer-review  
4 journal, Proceedings of the Biological Society of  
5 Washington?

6           A.    Yes, sir.  And I believe he's also on the  
7 editorial board of a creationist publication, as well.

8           Q.    And one of his responsibilities was to  
9 oversee the publication of peer-reviewed technical  
10 articles?

11          A.    That was his responsibility as editor of the  
12 Proceedings of the Biological Society of Washington.  
13 He was the -- I believe, the editor in chief, I  
14 believe.

15          Q.    And he allowed the article by Stephen Meyer,  
16 who we know, entitled, The Origin of Biological  
17 Information and the Higher Taxonomic Categories, to be  
18 published after a peer review.  Correct?

19          A.    There are quite a number of questions  
20 surrounding his allowing publication of that article,  
21 but, yes, it was published in the Proceedings.

22          Q.    And as a result of that, there were  
23 allegations of retaliation against Richard Sternberg.  
24 Are you aware of that?

25          A.    I am aware that Mr. Sternberg has made

1 allegations. Yes, I'm aware of the fact that he has  
2 made allegations.

3 Q. Okay. And those allegations involve  
4 transfer to a hostile supervisor, removal of his name  
5 from the placard on the door, deprivation of work  
6 space, loss of his keys. Are you aware of those  
7 allegations?

8 A. I know that he's made those allegations, but  
9 that came up at a period when I was very busy  
10 preparing for this trial, so I did not specifically  
11 follow up on those allegations. I do know that on a  
12 television show he made allegations against the  
13 National Center for Science Education which happened  
14 to be false.

15 Q. Well, are you -- strike that. Do you know  
16 that those allegations were investigated by the United  
17 States Office of Special Counsel?

18 A. I do know that. I don't know that they ever  
19 issued a formal report about it.

20 Q. Well, are you aware that the report did  
21 substantiate claims of retaliation by Richard  
22 Sternberg?

23 A. I would not say --

24 MR. ROTHSCHILD: Objection, Your Honor.  
25 He's characterizing a document without giving it to

1 the witness.

2 MR. THOMPSON: I'm just asking if she's  
3 aware, Your Honor.

4 MR. ROTHSCHILD: He's not referring to  
5 specific statements in the report.

6 THE COURT: Well, I don't know that he has  
7 to show her the document. You can answer the  
8 question. If you need clarification, you can ask for  
9 it. I'll overrule the objection. You can answer the  
10 question.

11 THE WITNESS: I'm aware that allegations  
12 were made. I'm not aware that they have been  
13 substantiated.

14 BY MR. THOMPSON:

15 Q. Well, you indicated that one of the  
16 allegations was that the NCSE helped devise a strategy  
17 to remove Dr. Sternberg?

18 A. I didn't specifically say what the  
19 allegation was. I said he made allegations on the  
20 Bill O'Reilly Show, which was the show he was on, that  
21 were false.

22 Q. Do you know those allegations?

23 A. I believe he talked about the NCSE's working  
24 with the -- I don't have a transcript in front of me,  
25 so my memory may not be exactly accurate here. I

1 think he was referring to an allegation that he made  
2 that the National Center for Science Education was  
3 instrumental in getting the article repudiated, I  
4 believe. I would have to go back and check. But I  
5 did watch the interview, and I do recall noting that  
6 what he was saying was not correct.

7 Q. Well, are you aware that the Office of  
8 Special Counsel did, in fact, confirm that there was  
9 retaliation sponsored by the NCSE?

10 A. The NCSE --

11 MR. ROTHSCHILD: Objection, Your Honor.  
12 Hearsay. And I renew my objection. I mean, he's  
13 characterizing a report that has presumably specific  
14 findings, and I'm not sure why he wouldn't make that  
15 available to the witness, which she has already said  
16 she hasn't seen.

17 MR. THOMPSON: Your Honor, she can answer  
18 whether she's aware of it or not. There is a report  
19 out there. We can get it during a break. But I don't  
20 know if that's really necessary.

21 THE COURT: I think we're now right on the  
22 edge, if we haven't already gone afield, of what's  
23 appropriate with this witness's testimony. And we may  
24 be beyond direct, but that objection hasn't been  
25 interposed. I could raise it sua sponte, but I'm not

1 going to do that at this point.

2 If you're going to ask questions generally,  
3 you may certainly do that. And to that extent, I'll  
4 overrule the objection. However, if you've got a  
5 document in your hand and you're asking questions from  
6 that document -- and it looks to me that at least at  
7 times you are -- fairness would dictate that you let  
8 the witness see the document and review the document  
9 so we don't play cat and mouse.

10 MR. THOMPSON: Right. Your Honor, I don't  
11 have the actual report in hand. I have some  
12 statements that were made regarding the reports. But  
13 I know the report is on the Internet, and I can get a  
14 copy of it. I don't know if we have to go that far at  
15 this point because I'm wrapping up my --

16 THE COURT: Well, you're stuck with the  
17 answers you get.

18 MR. THOMPSON: Right.

19 THE COURT: I mean, you're going to have  
20 your own case-in-chief, and you may or may not  
21 consider that something that you want to put in. I  
22 mean, we're into the yes/no realm as it relates to the  
23 question. So I'll overrule it. We've got to move  
24 through this witness. We've been on this witness now  
25 a day and a half almost. So let's keep moving.

1 BY MR. THOMPSON:

2 Q. Aside from Richard Sternberg, Dr. Sternberg,  
3 are you aware of any other allegations of retaliation  
4 against biologists, scientists, who have advocated the  
5 intelligent design theory?

6 MR. ROTHSCHILD: Your Honor, I will now  
7 object to exceeding the scope of direct. Thank you  
8 for the suggestion. It's going well beyond.

9 THE COURT: As I said, I think Mr. Thompson  
10 has walked it to the line. I'm going to let him  
11 finish this line of questioning. I'll overrule the  
12 objection, despite my invitation for you to object.

13 MR. ROTHSCHILD: I'm a good listener, Your  
14 Honor.

15 THE COURT: Be careful what you wish for.  
16 You may answer the question.

17 THE WITNESS: Could you explain to me  
18 specifically what you mean by "retaliation"?

19 BY MR. THOMPSON:

20 Q. Acts similar to what Dr. Richard Sternberg  
21 alleged.

22 A. I haven't seen anything that quite comes  
23 close to that. There have been cases in which a  
24 number of -- well, there are not that many.  
25 University faculty have received quite a bit of strong

1 criticism for talking about intelligent design in  
2 improper settings.

3 MR. THOMPSON: Thank you, Your Honor. Thank  
4 you for your indulgence.

5 THE COURT: All right, Mr. Thompson. That  
6 will complete the cross-examination. Any redirect,  
7 Mr. Rothschild?

8 MR. ROTHSCHILD: Yes. Thank you, Your  
9 Honor. May I approach the witness?

10 THE COURT: You may.

11 MR. ROTHSCHILD: Matt, could you pull up the  
12 two graphs of comparing creationism and intelligent  
13 design.

14 REDIRECT EXAMINATION

15 BY MR. ROTHSCHILD:

16 Q. Dr. Forrest, is it accurate to say this  
17 graph indicates that "creation," or as you've used the  
18 word its "cognates," appears probably between 150 and  
19 180 times in those first four drafts that you  
20 reviewed?

21 A. That's correct. That's what the graph  
22 shows.

23 Q. And I've placed before you a copy of P11,  
24 which is the 1993 version of *Pandas*. And could you  
25 tell me how many pages this published version has?

1 A. Counting everything with the index --

2 Q. Why don't we just go through the text before  
3 the references.

4 A. Just the text?

5 Q. Yes.

6 A. Okay.

7 Q. Or, actually, I'm sorry, why don't you  
8 include the references and glossary.

9 A. Everything, counting everything, index and  
10 everything, it's 170.

11 Q. Were the drafts that you reviewed of  
12 approximately the same length as the final version?

13 A. Pretty much, just about.

14 Q. So is it fair to say that "creation" appears  
15 about once per page in these drafts of *Pandas*?

16 A. Yes, on average.

17 Q. Mr. Thompson asked you about James Dobson  
18 and also Mr. Kennedy. Those are leaders of religious  
19 organizations?

20 A. Yes.

21 Q. And they are strong supporters of  
22 intelligent design. Correct?

23 A. They are.

24 Q. And they don't -- do they otherwise support  
25 scientific research generally as part of their

1 mission?

2 A. Not as far as I know.

3 Q. Dr. Forrest, could you open your book -- or,  
4 actually, let me just hold that question for a moment.  
5 Mr. Thompson asked you about the concept of secular  
6 humanism.

7 A. Yes, he did.

8 Q. That's a philosophical position. Correct?

9 A. Yes.

10 Q. Should that be taught in science class?

11 A. No.

12 Q. Is the humanist manifesto that Mr. Thompson  
13 referred to also a philosophical position?

14 A. It is.

15 Q. Should those principles be taught in science  
16 class?

17 A. Certainly not.

18 Q. In your view, is intelligent design a  
19 philosophical or a theological position?

20 A. It's a religious position which overlaps  
21 philosophical, too.

22 Q. Should that be taught in science class?

23 A. No.

24 Q. As regards the theory of evolution, does the  
25 scientific community that studies it begin their

1 research into it by looking at passages of Scripture  
2 and then looking for scientific evidence that's  
3 consistent with that Scripture?

4 A. No.

5 Q. Is that what major figures in the  
6 intelligent design movement have described themselves  
7 as doing?

8 A. Yes.

9 Q. Mr. Johnson?

10 A. Yes.

11 Q. Mr. Dembski?

12 A. Yes.

13 Q. Could you now open your book, *Creationism's*  
14 *Trojan Horse*, to Page 241. And, actually, if you see  
15 at the beginning of 240, when Mr. Thompson was asking  
16 you about the Santorum amendment, he had you read from  
17 the text beginning on Page 240 through the numbered  
18 items on 241. Do you recall that?

19 A. Yes.

20 Q. Okay. And then he asked you to stop reading  
21 at that point?

22 A. Yes.

23 Q. Could you read the next paragraph? It  
24 begins with the words, I will read.

25 A. Yes. This is Senator Santorum's words.

1 Quote, I will read three points made by one of the  
2 advocates of this thought, a man named David DeWolf,  
3 as to the advantages of teaching this controversy that  
4 exists. He --

5 Q. That's enough. Who is David DeWolf?

6 A. David DeWolf is a law professor at Gonzaga  
7 University. He is also a fellow of the Center for  
8 Science and Culture and is one of the -- is integrally  
9 involved in the intelligent design movement.

10 Q. That's the same Center for Science and  
11 Culture that prepared the Wedge document?

12 A. Yes.

13 Q. The title, *Creationism's Trojan Horse*, why  
14 did you select that?

15 A. That was actually suggested by Oxford  
16 University Press. And my coauthor and I considered it  
17 and decided that that was an apt description.

18 Q. Why?

19 A. Well, the story of the Trojan horse is the  
20 story of the Greeks offering a wooden horse, a Trojan  
21 horse, to the city of Troy, ostensibly as a gift,  
22 something that would have positive value for them.  
23 And, in truth, what that gift contained was something  
24 that worked to the destruction of the city. That's  
25 the story.

1 Q. And why is that an apt title for your book  
2 about intelligent design?

3 A. Well, what the intelligent design movement  
4 is saying is that they are offering a cutting-edge,  
5 new scientific theory that will balance the curriculum  
6 and present an alternative scientific theory.

7 In truth, it is no such thing. It is a  
8 religious belief which is being described as a  
9 scientific theory, but, in truth, it is not. It would  
10 not be beneficial to teach this to children as  
11 science.

12 Q. When this book was published and you  
13 accepted the title suggested by your publisher, did  
14 you know that the book *Of Pandas and People* had, in  
15 fact, been drafted as a creationist book using the  
16 term "creation" and "creationist" throughout?

17 A. When I wrote this book?

18 Q. Yes.

19 A. No, I didn't know that.

20 Q. Is it fair to say that the metaphor is even  
21 more apt now?

22 A. I would say so.

23 MR. ROTHSCHILD: No further questions, Your  
24 Honor.

25 THE COURT: Any recross, Mr. Thompson?

1 MR. THOMPSON: Just one bit, Your Honor.

2 THE COURT: There's not much scope to work  
3 within.

4 MR. THOMPSON: I know, the book.

5 RE CROSS-EXAMINATION

6 BY MR. THOMPSON:

7 Q. I want you to go to Page 241 that was  
8 referred to by your counsel. And you were reading a  
9 part of the report of the Santorum amendment.

10 A. Yes.

11 Q. I would like you to read the last paragraph,  
12 which purports to be comments by Senator Santorum.

13 A. Just the very last one?

14 Q. Yes.

15 A. (Reading:) I think there are many benefits  
16 to this discussion that we hope to encourage in  
17 science classrooms across this country. I frankly  
18 don't see any downside to this discussion, that we are  
19 standing here as the Senate in favor of intellectual  
20 freedom and open and fair discussion of using science,  
21 not philosophy and religion within the context of  
22 science, but science as the basis for this  
23 determination, end quote.

24 MR. THOMPSON: Thank you. That's all, Your  
25 Honor.

1 THE COURT: All right. We thank you,  
2 Professor. That will complete your testimony. You  
3 may step down. The plaintiffs may call their next  
4 witness.

5 MR. SCHMIDT: Your Honor, plaintiffs call  
6 Jennifer Miller.

7 THE COURT: All right.

8 JENNIFER MILLER, called as a witness, having  
9 been duly sworn or affirmed, testified as follows:

10 THE CLERK: State your name for the record  
11 and spell it, please.

12 THE WITNESS: My name is Jennifer Miller,  
13 capital J-e-n-n-i-f-e-r, capital M-i-l-l-e-r.

14 THE COURT: You may proceed.

15 MR. SCHMIDT: Your Honor, Tom Schmidt for  
16 the plaintiffs.

17 DIRECT EXAMINATION

18 BY MR. SCHMIDT:

19 Q. Are you employed by the Dover Area School  
20 District?

21 A. Yes.

22 Q. In what position?

23 A. Biology teacher.

24 Q. How long have you worked for the Dover Area  
25 School District?

1 A. This is my thirteenth year.

2 Q. What courses do you teach?

3 A. Currently I teach biology, honors biology,  
4 and anatomy and physiology.

5 Q. Do you have any seniority within the science  
6 department at the Dover Area School District?

7 A. Our department head, Mrs. Spahr, has been  
8 there for, I believe, 41 years, and I am next under  
9 her with 13 years.

10 Q. In connection with this litigation, did you  
11 produce documents in response to written discovery  
12 that was sent by plaintiffs to the defendant, Dover  
13 Area School District?

14 A. Yes.

15 Q. I may ask you some questions about  
16 documents.

17 MR. SCHMIDT: And, Your Honor, may I  
18 approach the witness with a binder of exhibits?

19 THE COURT: You may. And that reminds me,  
20 we did not take up any exhibits, my omission and  
21 yours, too, Counsel, with respect to Dr. Forrest. And  
22 I think that's probably a good thing so that we can  
23 move along, but I'll rely on you to pick that up at  
24 some opportune time. Principally, I'll rely on  
25 plaintiffs' counsel. There may be some defendants'

1 exhibits. I think there are. You may proceed, Mr.  
2 Schmidt.

3 MR. SCHMIDT: Thank you, Your Honor.

4 BY MR. SCHMIDT:

5 Q. Ms. Miller, let me ask you a few questions  
6 about your own educational background. Where did you  
7 receive your own undergraduate degree?

8 A. Elizabethtown College.

9 Q. When did you receive the degree?

10 A. 1993.

11 Q. What was your major?

12 A. Biology.

13 Q. Did you attend any postgraduate courses?

14 A. Yes.

15 Q. Did you receive a degree?

16 A. Yes.

17 Q. In what?

18 A. I have a master's of education.

19 Q. From what institution?

20 A. Penn State.

21 Q. When did you get it?

22 A. 1999.

23 Q. What was the principal subject area of your  
24 master's?

25 A. A focus in teaching in the curriculum.

1 Q. Are you certified to teach by the  
2 Commonwealth of Pennsylvania?

3 A. Yes.

4 Q. When did you obtain your certification?

5 A. 1993.

6 Q. Must you be certified to teach in  
7 Pennsylvania?

8 A. Yes.

9 Q. How are you certified? I mean, what is the  
10 nature of your certification?

11 A. You have to have a degree in the area that  
12 you are going to teach, and then you have to have two  
13 examinations. They're called the NTEs. One is in  
14 your subject area. Mine was biology. And you also  
15 have to have an exam in general knowledge of  
16 education.

17 Q. Must you do anything after you receive your  
18 certification to maintain it?

19 A. Yes.

20 Q. And what have you done to maintain your  
21 certification?

22 A. Every five years you have to have so many  
23 credit hours or in-service hours or credits to  
24 maintain your certification.

25 Q. And have you done that since you became a

1 certified teacher in Pennsylvania?

2 A. Yes.

3 Q. I'm going to ask you some questions now  
4 about events at the Dover Area School District.

5 A. Okay.

6 Q. First of all, I think you've indicated this  
7 in your testimony, but you have taught always in the  
8 senior high school. Is that right?

9 A. Yes.

10 Q. Do you remember a time in the spring of 2003  
11 when you spoke to the department chair, Mrs. Spahr,  
12 about a board member and concerns about how biology is  
13 taught at the area high school?

14 A. Yes.

15 Q. What do you recall about that conversation?

16 A. Mrs. Spahr mentioned to us, I believe it was  
17 probably at a department meeting, that she had  
18 received a memo or had been speaking to administration  
19 about a board member's I guess wanting equal time with  
20 creation and evolution.

21 Q. Let me ask you a few questions about that  
22 conversation. First of all, you said she had spoken  
23 or had some communication with administration. Did  
24 she mention anyone in particular in the district  
25 administration?

1 A. I believe she said Mr. Baksa.

2 Q. And who is Mr. Baksa?

3 A. Our assistant superintendent.

4 Q. Is he the assistant superintendent now?

5 A. Yes.

6 Q. And did Mrs. Spahr identify the board member

7 that was the subject of this conversation?

8 A. I don't remember at that time, no.

9 Q. Can you remember anything more that she said

10 than that a board member wanted equal time for the

11 teaching of creationism?

12 A. I think she was unsure as to what that

13 meant. And I think she may have mentioned something,

14 you know, that we need to be on our guard or something

15 to that effect.

16 Q. Let me ask you a few questions now about how

17 you teach evolution within your biology classes.

18 A. Okay.

19 Q. Let me go back to be sure it's clear. You

20 teach two biology classes or two sorts of biology. Is

21 that right?

22 A. Yes.

23 Q. Biology I?

24 A. Yes.

25 Q. Is there another biology course that you

1 teach?

2 A. Just honors biology, which is still the same  
3 students, just a higher level.

4 Q. Both classes are taught in the ninth grade  
5 at the present time?

6 A. Yes.

7 Q. How do you go about teaching evolution to  
8 your biology students?

9 A. Day one I ask them for their definitions of  
10 evolution because I think there are a lot of  
11 misconceptions as to what evolution means. So we get  
12 their definitions. And I basically state that  
13 evolution means change over time, and that's how we're  
14 going to approach evolution.

15 And then we give -- I have the students come  
16 up with examples of how things changed over time. And  
17 most of them can give me examples that things have  
18 changed over time. So I, you know, tell them that  
19 basically there is a lot of controversy over beliefs,  
20 I guess, how life began.

21 And I basically say that we're not going to  
22 touch on how life began. I think I basically say, I  
23 don't care how you believe life began, we're going to  
24 look at what has happened to life since it got here,  
25 however it got here, and move on from there.

1 Q. There's a phrase that I'll ask you questions  
2 about as we go forward, but it has certainly come up  
3 in this litigation, the phrases "origin" or "origin of  
4 life." Is that something that you teach in the  
5 ninth-grade biology class?

6 A. No.

7 Q. Do you teach something about the origin of  
8 species in ninth-grade biology?

9 A. Yes.

10 Q. Can you tell me a little bit about that?

11 A. The origin of species, sometimes called  
12 speciation, for example, would be -- and I'll use  
13 Darwin's finches as an example, that they were finches  
14 and now are isolated on different islands, the  
15 Galapagos Islands, and have become different species  
16 of finches, still a finch but different species of  
17 finches. To me that's speciation.

18 Q. Are you familiar with state standards for  
19 teaching biology in the public schools in  
20 Pennsylvania?

21 A. Yes.

22 Q. Would you turn in your book to Plaintiffs'  
23 Exhibit 210. There are tabs on the side. Can you  
24 identify what's been marked as Plaintiffs' Exhibit  
25 210?

1           A.    Yes.  Those are the state standards in  
2 science and technology.

3           Q.    If you look at the first page, is there a  
4 date on the bottom?

5           A.    January 5th, 2002.

6           Q.    When did you become aware that there were  
7 state standards for the teaching of biology in  
8 Pennsylvania's public schools?

9           A.    They went through several revisions, but I  
10 believe somewhere around summer of 2001 is when we got  
11 our final copy of the state standards in science.

12          Q.    And in your work as a teacher at Dover, do  
13 you refer to or rely on the state standards?

14          A.    Yes.

15          Q.    In what way?

16          A.    We are required to teach to the standards.  
17 In each subject area, we must make sure that students  
18 are competent in those standards in the area that we  
19 teach.  We also, when these came out, we made sure our  
20 curriculum was aligned to the state standards.  And at  
21 that time we did some changing and rearranging of some  
22 things because of the state standards.

23          Q.    Let me ask you a few questions about that.  
24 You said that "we" made some changes to the  
25 curriculum.  Were you personally involved in that

1 process?

2 A. Yes.

3 Q. Tell me what you did.

4 A. Looking at the state standards and their  
5 emphasis, I guess you want to say, we -- at that time  
6 we taught biology to tenth graders, and we had an  
7 earth science class in ninth grade. And we also saw  
8 that the standards were -- there's a whole other set  
9 of standards on environment and ecology, so we felt  
10 that students needed environment and ecology, so we  
11 moved our biology classes to ninth grade to then offer  
12 an environment and ecology class in tenth grade.

13 We also looked at, again, where our emphasis  
14 was in biology to make sure that we -- I remember  
15 taking some things out that we currently taught in  
16 biology and making sure we hit things that were in the  
17 standards.

18 Q. At the time the standards came out in 2002  
19 or somewhere in that neighborhood -- you can correct  
20 me if you can -- did the Dover Area School District  
21 participate in a field test of an examination in high  
22 school biology?

23 A. Yes.

24 Q. Tell us about that.

25 A. Currently we have standardized tests in math

1 and English. And it's to eleventh graders. And the  
2 proposal at that time was to take a standardized test  
3 in science in the tenth-grade year, and they were  
4 field testing the examination, and we were involved in  
5 that field test. Several of our classes took the  
6 field test, I guess to look at data and that kind of  
7 thing.

8 Q. And in teaching to the standards, is it  
9 anticipated that at some time public school students  
10 in Pennsylvania will be tested against the standards  
11 in biology?

12 A. Yes.

13 Q. When do you anticipate that that test will  
14 first be used?

15 A. I believe 2007.

16 Q. Did your experience with the field test of  
17 that assessment examination affect how you taught  
18 biology at Dover High School?

19 A. Yes.

20 Q. In what way?

21 A. We felt that the field test that our  
22 students were given -- we had a chance to, you know,  
23 look over some questions, and we thought that  
24 especially some of the essay questions were very heavy  
25 in evolution.

1 Q. Could you turn to Page 13 of Exhibit 210.

2 A. Okay.

3 Q. If you look at the subsection that starts  
4 with the capital letter D --

5 A. Yes.

6 Q. -- is that section that carries on to the  
7 next page the state standard for the teaching of  
8 evolution in high school biology?

9 A. Yes.

10 Q. Now, I noticed that the standards, if you  
11 look back to the beginning, appear to be focused on  
12 teaching biology in tenth grade.

13 A. Yes.

14 Q. Is that right?

15 A. Yes.

16 Q. Was the Dover School District free to move  
17 the biology course to ninth grade?

18 A. The test was in tenth grade, so as long as  
19 they covered this material before the test in tenth  
20 grade, yes. At that time that's what the test was  
21 supposed to be.

22 Q. When you, at the Dover High School,  
23 separated biology and environmental sciences, you  
24 devised two curriculums, one for each course. Is that  
25 right?

1 A. Yes.

2 Q. Did the curriculum that you worked on after  
3 the standards came out include material on evolution  
4 for ninth-grade biology?

5 A. Yes.

6 Q. Do you know if the curriculum for  
7 environmental science, which is to be taught to tenth  
8 graders, includes information or material on the  
9 subject of evolution?

10 A. That I'm not sure of, no.

11 Q. When you structured the curriculum for  
12 ninth-grade biology, did you put the unit on evolution  
13 at any particular time?

14 A. It's currently at the end. We're on  
15 semesters, so we work from August to January, and then  
16 again we teach it from January to June. So it would  
17 have been at the end of our studies.

18 Q. Why did you put it at the end of the biology  
19 course?

20 A. I would say two reasons. One, because of  
21 where it fell in the textbook and you need some of the  
22 other -- for example, if you look at the standards, it  
23 says that they're to analyze DNA studies and look at  
24 some -- somewhere it says about mutations and gene  
25 recombination, and we wouldn't get to that. You need

1 the background in DNA and genetics before you get to  
2 that, so it's after those units.

3 We also thought that it made sense to be at  
4 the end also because I think evolution is -- bears  
5 heavily on environment and ecology and how populations  
6 change and how they compete for resources and things  
7 like that. So it lent itself to be at the end because  
8 then the next step that they would have would be their  
9 environment course.

10 Q. Now, you said a moment ago that you worked  
11 on the changes to the high school curriculum once the  
12 standards were published?

13 A. Yes.

14 Q. I want to ask you for the details of the  
15 changes, but in that process, was there any  
16 involvement by board members in changing the biology  
17 curriculum?

18 A. No.

19 Q. What happened to the changes you proposed?

20 A. We wrote up a curriculum of studies and then  
21 submitted them to the administration. And I believe  
22 they are voted upon or approved by the school board.

23 Q. Do you know whether the board actually voted  
24 to approve the changes?

25 A. I'm assuming so, yes. I wasn't at the

1 meeting where it was done.

2 Q. To be clear about my question so there's no  
3 confusion, whether or not the board voted to approve  
4 them, was there any involvement of a board member or  
5 board curriculum committee in developing those  
6 changes?

7 A. No.

8 Q. Did you continue to teach from that biology  
9 curriculum from whenever it was approved, I gather in  
10 2002 until -- or through the year 2004?

11 A. Yes.

12 Q. Now, I'm going to go back to the chronology.

13 A. Okay.

14 Q. You've mentioned a conversation with  
15 Mrs. Spahr in the spring of 2003?

16 A. Yes.

17 Q. Do you recall any meeting in the fall of  
18 2003 involving a board member who expressed concerns  
19 about how evolution was taught at the Dover High  
20 School?

21 A. Yes.

22 Q. Who was the board member?

23 A. Mr. Bonsell.

24 Q. What was his position on the board at that  
25 time?

1           A.    At that time I believe he was head of the  
2 curriculum committee.

3           Q.    Did you have a meeting with Mr. Bonsell?

4           A.    Yes.

5           Q.    Who else was at the meeting, if you recall?

6           A.    I believe Mr. Baksa, and I can't remember if  
7 Dr. Peterman, who was our principal at the time, was  
8 there. She may have been. But I remember most, if  
9 not all of the science department was there, also.

10          Q.    Was Mrs. Spahr there?

11          A.    Yes.

12          Q.    Were there any other board members besides  
13 Mr. Bonsell?

14          A.    No.

15          Q.    To your knowledge, at that time were there  
16 other board members who were members of a curriculum  
17 committee?

18          A.    At that time I wasn't aware of what the  
19 curriculum committee was, no.

20          Q.    Did you know, at the time of the meeting,  
21 whether Mr. Bonsell had a child who was attending the  
22 Dover High School?

23          A.    Yes.

24          Q.    What do you know about the child, what  
25 grade?

1 A. He was in ninth grade that year.

2 Q. Had that child taken a biology course at the  
3 time of this meeting?

4 A. No.

5 Q. Was that something the child would have  
6 taken in the course of the ninth grade?

7 A. Yes, I believe he was scheduled to take it  
8 in the spring.

9 Q. Did Mr. Baksa or anyone else say anything to  
10 you to prepare you for the meeting or that you at  
11 least understood to be preparation for the meeting?

12 A. Yes.

13 Q. Who said what?

14 A. I believe at this time is when we mentioned  
15 about the statement earlier that I wasn't aware of who  
16 the board member was that made the statement about  
17 equal time with creationism and evolution. And at  
18 this time I believe -- whether it was Mrs. Spahr,  
19 Mr. Baksa, made us aware that it was Alan Bonsell that  
20 made that statement.

21 We also were told by Mr. Baksa just some  
22 background on Mr. Bonsell, that he was what Mr. Baksa  
23 said, a young earth theorist or young earth  
24 creationist, didn't believe in some of the fossil  
25 records or some of the dating of fossil records, I

1 believe. So that was the background we were given.

2 Q. What was your understanding at the time of  
3 what it meant to be a young earth creationist?

4 A. Basically that -- I believe they believe  
5 that the earth is somewhere around 10,000 years old,  
6 didn't believe that the earth was as old as some of  
7 the carbon dating and things like that that the  
8 evidence shows.

9 Q. At the time of this meeting -- and I think  
10 you've said this already -- you were the senior  
11 biology teacher. Is that right?

12 A. Yes.

13 Q. Did you become the principal spokesperson  
14 for the science department in whatever discussion took  
15 place at this meeting?

16 A. As far as in the biology curriculum when he  
17 was asking questions about how we taught evolution,  
18 then, yes, I became the spokesperson for that.

19 Q. Can you summarize what the questions or  
20 concerns were that were expressed by Mr. Bonsell at  
21 that meeting?

22 A. His concern was, again, how we taught  
23 evolution. And I explained how we taught evolution  
24 just as I explained to you, day one where we go with  
25 evolution. We did explain that we teach the origin of

1 species, not necessarily the origin of life. His  
2 concern was definitely with the teaching of the origin  
3 of life.

4 He was concerned that we would convey  
5 something to the students that was in opposition to  
6 what their parents were conveying to them at home and  
7 didn't want to pit the teachers in the middle of, you  
8 know, having the students say, well, somebody is  
9 lying, basically.

10 So, again, we reiterated that we don't teach  
11 the origin of life. We stick with the origin of  
12 species. And I remember, at the end of that meeting,  
13 that we thought everything was okay. And I remember  
14 him even saying that, you know, he agreed with that  
15 part of what we taught, too. He was okay with that  
16 part.

17 Q. Now I'm going to take you forward in time.

18 A. Okay.

19 Q. Do you recall a meeting in the spring of  
20 2004 with a board curriculum committee?

21 A. Yes, several of them.

22 Q. Do you recall the first such meeting? Or  
23 what meeting do you recall, at least, as the first  
24 one?

25 A. The first one that I can remember was

1       sometime April, I would say. We were -- there's a  
2       rotation of getting new textbooks. And the science  
3       department was up in that rotation for getting new  
4       textbooks, and we were sort of justifying which  
5       textbooks we wanted, how they were significantly  
6       different from the previous textbook, why we needed  
7       new textbooks, and that kind of thing.

8           Q.     Let me ask you two quick background  
9       questions. Do you recall what textbook was in use by  
10      the biology teachers in the beginning of 2004?

11      A.     Yes.

12      Q.     Which was it?

13      A.     It was the -- I believe it's 1998 was the  
14      last time we ordered the books, edition of Miller and  
15      Levine's book.

16      Q.     Okay. Was that book up for replacement in  
17      the -- I'll call it the ordinary cycle before early  
18      2004?

19      A.     Yes.

20      Q.     When did it first come up for replacement?

21      A.     It would have been the year before that.

22      Q.     And to your knowledge, was that decision to  
23      purchase new books postponed for some reason?

24      A.     Yes.

25      Q.     Do you know what the reason was or were you

1 ever told by anyone?

2 A. I think it was -- my recollection is that to  
3 save money, they were going to put off ordering any  
4 textbooks that year, so no one got any textbooks that  
5 year. I remember a discussion of a fund balance was  
6 going to be used to order textbooks the next year. So  
7 no one got textbooks.

8 Q. Now, in 2004, was the subject of this first  
9 meeting you recall with the curriculum committee the  
10 justification for purchasing a new book?

11 A. Yes.

12 Q. Did you do any work to provide that  
13 justification?

14 A. Yes.

15 Q. Can you turn to what's been marked as Tab  
16 148, which is also Plaintiffs' Exhibit 148.

17 A. Okay.

18 Q. Is this the document that you prepared --

19 A. Yes.

20 Q. -- to justify the purchase?

21 A. Yes.

22 Q. And was it prepared around the time of the  
23 meeting in the spring of 2004?

24 A. Yes.

25 Q. Was one of the reasons that you suggested a

1 new textbook to bring it into line with the new  
2 curriculum which was based on the new state standards?

3 A. Yes.

4 Q. Does that appear anywhere on this page?

5 A. Number 3, the order of the textbook aligns  
6 itself to our curriculum.

7 Q. At the end of that meeting, what was your  
8 understanding about what would happen next with the  
9 textbook requisition for biology?

10 A. That they would be put before a vote of the  
11 school board.

12 Q. When was the next meeting that you recall  
13 having with the curriculum committee in the spring of  
14 2004?

15 A. Sometime very close to the -- if not the  
16 last day of school, somewhere around the last day of  
17 school in June of that same year.

18 Q. Who was at that meeting?

19 A. It was the curriculum committee, which would  
20 at that time have consisted of Mr. Buckingham,  
21 Mrs. Harkins, Mrs. Brown, I believe Mr. Baksa was  
22 there, and I know at least Mr. Eshbach, myself, and  
23 Mrs. Spahr were there.

24 Q. At this meeting what were you told was the  
25 subject of discussion?

1           A.    We had gotten a list of concerns by  
2 Mr. Buckingham on how the textbook presented  
3 evolution.

4           Q.    Let me ask you to turn to Tab 132.

5           A.    Okay.

6           Q.    I'm showing you what's been marked as  
7 Plaintiffs' Exhibit 132 and ask if you recognize this  
8 document.

9           A.    Yes.

10          Q.    What is it?

11          A.    That's the list of concerns we had gotten  
12 given to us by Mr. Baksa.

13          Q.    Now, before I ask you some questions about  
14 this list of concerns, were you in attendance at a  
15 school board meeting on June 7th?

16          A.    I don't believe so.

17          Q.    Do you recall hearing from anyone that there  
18 was a discussion about a mural at the school board  
19 meeting on June 7th?

20          A.    Yes.

21          Q.    Was there a discussion about a mural at the  
22 board curriculum committee meeting that you're now  
23 testifying about near the end of school that June?

24          A.    Yes.

25          Q.    What was that discussion?

1           A.    My recollection is that someone mentioned  
2 something about a mural, I don't know, held up a  
3 picture or something like that at a previous board  
4 meeting. And at the June -- I think it's somewhere  
5 around June 14th meeting of the curriculum committee,  
6 Mrs. Spahr asked Mr. Buckingham where he had gotten  
7 that picture of the mural.

8           Q.    Let me ask you if you knew, when she asked  
9 that question, what mural she was referring to.

10          A.    Yes.

11          Q.    What was the mural?

12          A.    It was a mural done by a senior as his  
13 senior project that showed basically the evolution of  
14 man. It was donated to the school or to a teacher  
15 because it was so big he couldn't basically take it  
16 home with him, so it was donated to him and it was in  
17 the back of his classroom.

18          Q.    Does each science teacher at the high school  
19 have his or her own classroom?

20          A.    Yes. There may be a floater or two that  
21 goes between, but yes.

22          Q.    You said that the mural was at the back of a  
23 teacher's classroom. Was it hanging on the wall,  
24 leaning against the wall? How was it --

25          A.    I believe it was propped up on the -- there

1 was a chalkboard on the back, and it was propped up on  
2 the chalk tray.

3 Q. Had you ever seen the mural yourself?

4 A. Yes.

5 Q. How big was it?

6 A. It took up the whole back portion of his  
7 room, so it was big.

8 Q. Do you remember a time when the mural was no  
9 longer in that classroom?

10 A. Yes.

11 Q. At the time that it was no longer there, did  
12 you know what happened to it?

13 A. No.

14 Q. Back to the meeting in June of 2004.  
15 Mrs. Spahr, as you've testified, asked Mr. Buckingham  
16 a question about having a picture of the mural. Who  
17 was Mr. Buckingham?

18 A. A member of the school board. At that time  
19 I believe he was head of the curriculum committee,  
20 also.

21 Q. What was his response to her question about  
22 having a picture of the mural, do you recall?

23 A. I think she asked where he had gotten it,  
24 and he didn't answer that. And she asked what  
25 happened to the mural, do you know what happened to

1 the mural? I believe his words were that I gleefully  
2 watched it burn.

3 Q. The mural, as you've described it, depicts  
4 the evolution of man?

5 A. Yes.

6 Q. Was there some discussion of the evolution  
7 of man or monkeys and men or anything that related to  
8 that during this curriculum committee meeting?

9 A. Yes.

10 Q. Can you recapitulate a bit what that  
11 discussion involved?

12 A. Most of the discussion focused around, you  
13 know, again, I thought you didn't teach origins of  
14 life, how can this mural be in the back of a classroom  
15 if you don't teach that, what message does that send  
16 to the students if you're not teaching it but this  
17 mural is in the back, and, again, disagreeing with the  
18 whole idea that man evolved, I guess, or came from  
19 monkeys.

20 Q. Was that discussion about man's evolution  
21 and what was depicted on the mural associated in the  
22 discussion of Mr. Buckingham's concerns about the  
23 biology textbook that is reflected on what's been  
24 marked as Exhibit 132?

25 A. Yes.

1 Q. Explain that, please.

2 A. Some of his -- before this meeting we looked  
3 over his concerns and looked at the page numbers  
4 trying to just get a general sense of, you know, where  
5 his problems were, you know, trying to get an idea.

6 And there was -- I can't point them out  
7 specifically, but I know there were several of them --  
8 I remember one of them, for example, said -- it was a  
9 teacher-to-teacher section, and it was asking the  
10 students -- a suggestion for the teacher to ask  
11 students to propose, for example, if humans were sent  
12 to another planet and subjected to the environment on  
13 that planet, what kind of -- what kinds of adaptations  
14 might they have at that new planet and how might they  
15 evolve, you know, to occupy that new planet. And that  
16 was one of his.

17 So that sort of related to, again, didn't  
18 necessarily believe that man evolved, and, you know,  
19 if we were asking students to do that, it showed that  
20 man evolved and that kind of thing. So it was related  
21 to that.

22 Q. Do you recall any comments that  
23 Mr. Buckingham himself made about the concerns that  
24 are listed on Plaintiffs' Exhibit 132, other than the  
25 ones you've already --

1 A. No, nothing in particular, no.

2 Q. What was your response to Mr. Buckingham's  
3 concerns?

4 A. We again reiterated how we teach evolution,  
5 sort of the same conversation that we had had with  
6 Mr. Bonsell the previous year. And we also pointed  
7 out that some of his concerns were in -- he had a  
8 teacher's edition, so some of his concerns were in the  
9 teacher's edition, and if he was worried about what  
10 students would see, they would not get the teacher  
11 edition, so they wouldn't see what was in the teacher  
12 edition.

13 Q. Do you recall which edition of the biology  
14 textbook you were referring to? I don't mean teachers  
15 versus student, but date.

16 A. 2002.

17 Q. Was that the one that had been under  
18 consideration up to that point?

19 A. Yes.

20 Q. Okay. I'm still at the spring meeting. Did  
21 you receive some other documents from either  
22 Mr. Buckingham or Mr. Baksa at that meeting?

23 A. Yes.

24 Q. I'd like you to turn to what's been tabbed  
25 as P136 and is marked as Plaintiffs' Exhibit 136.

1 A. Okay.

2 Q. Have you seen this document before?

3 A. Yes.

4 Q. Is that your handwriting in the upper  
5 right-hand corner, by the way?

6 A. Yes.

7 Q. Did you put that handwriting on there as  
8 part of the process of producing documents that I  
9 asked you about earlier?

10 A. Yes.

11 Q. What is this document?

12 A. This is a product profile of the textbook  
13 that I believe the Bob Jones University uses in their  
14 biology instruction.

15 Q. What were you told was the reason for giving  
16 you this particular document?

17 A. I just remember giving -- they were doing a  
18 survey, sort of, of different textbooks that were out  
19 there or different textbooks used, and I just remember  
20 getting this one as an example of one that's used in  
21 other universities or high schools, that type of  
22 thing.

23 Q. You said "they." Who did you mean?

24 A. I know Mr. Baksa gave this to us, so --

25 Q. Were you asked, as the senior biology

1 teacher, by anyone in the school district  
2 administration or anyone on the curriculum committee  
3 to get other selections or suggestions for a biology  
4 textbook?

5 A. No.

6 Q. Turn, if you would, to the next tab in your  
7 book, which is Plaintiffs' Exhibit 138.

8 A. Okay.

9 Q. What is this document?

10 A. This was also given to us at that meeting by  
11 Mr. Baksa. It's a survey of biology books used in  
12 local -- in York County Christian schools.

13 Q. Do you know who assembled this information?

14 A. It was given to us by Mr. Baksa.

15 Q. At this same meeting?

16 A. Yes.

17 Q. There's handwriting at the top right corner.  
18 Was that your handwriting?

19 A. Yes.

20 Q. And did you put that on when you produced  
21 this document through discovery?

22 A. Yes.

23 Q. There is another place in the first line  
24 where there's handwriting that appears to be the title  
25 and publisher of a book. Whose handwriting is that?

1 A. Mine.

2 Q. When were you given that information?

3 A. I believe at that meeting that he was unsure  
4 of what the Christian School of York used and found  
5 out since then, and so we wrote it in.

6 Q. Did Mr. Baksa tell you at this meeting why  
7 he collected information about books being used in  
8 parochial or sectarian schools?

9 A. Not really, no.

10 Q. Did he ask you to do anything with this  
11 information?

12 A. No.

13 Q. Did you do anything with this information?

14 A. No.

15 Q. Okay. Turn to Tab 148, please.

16 A. Okay.

17 Q. Behind the tab are two pages marked as  
18 Plaintiffs' Exhibit 149. Have you ever seen these  
19 documents before?

20 A. I'm at Tab 149, not 148.

21 Q. I'm sorry, 149.

22 A. 149. Okay. Yes.

23 Q. When did you see them?

24 A. They were given to us somewhere around this  
25 curriculum meeting. I can't remember if they were

1 handed out at that curriculum meeting or sometime  
2 before that curriculum meeting.

3 Q. And by "that curriculum meeting," again,  
4 we're talking about the one around the end of school  
5 in June, '04?

6 A. Yes.

7 Q. And the handwriting on the top of the first  
8 page is your handwriting. Is that right?

9 A. Yes.

10 Q. And put on this document when you were  
11 producing it in response to discovery?

12 A. Yes.

13 Q. Okay. Was there any discussion of the first  
14 page in Exhibit 149 called, Beyond the Evolution  
15 versus Creation Debate at the curricular committee  
16 meeting?

17 A. No, not that I can recall.

18 Q. Was there any discussion of the next page,  
19 which appears to chart out different views on the  
20 origin of the universe and life at that meeting?

21 A. No.

22 Q. Now, I'm going to take you to another  
23 meeting about this same time. Did you attend a  
24 meeting of the school board on June 14th, 2004?

25 A. Yes.

1 Q. Do you recall at that meeting a person named  
2 Charlotte Buckingham making a statement during the  
3 public comment portion of the meeting?

4 A. Yes.

5 Q. Tell us what you recall about her statement.

6 A. I remember her reading many Bible verses, I  
7 know some were from Genesis, and stating that  
8 basically this is the truth and how can we teach  
9 anything else.

10 Q. Was it your understanding at the time she  
11 made this public statement that it was related to  
12 something on the agenda of the school board?

13 A. Yes.

14 Q. What was it, as you understood it, that was  
15 on the agenda that she was speaking to?

16 A. I believe at that time it was the purchase  
17 of the textbooks.

18 Q. The biology textbooks?

19 A. Yes.

20 Q. Do you recall if Mr. Buckingham made any  
21 statements during the meeting of the school board on  
22 June 14th?

23 A. Yes.

24 Q. What do you recall he said?

25 A. I remember him -- again, I wasn't at the

1 June 7th meeting, but because of statements he made at  
2 the June 7th meeting, that he was asked to sort of  
3 tone down some of his remarks that were made at the  
4 June 7th meeting. And he said something to the effect  
5 that I am who I am, and if you don't like it -- I'm  
6 going to state my beliefs, and if you don't like it,  
7 you can vote me out at the next election.

8 Q. Did he make any other statements about his  
9 beliefs or views on subjects pertinent to the purchase  
10 of the textbook?

11 A. Yes.

12 Q. What did he say?

13 A. I believe there were several. I remember  
14 him saying something about, again, this nation being  
15 founded on Christianity, and we should teach as such.  
16 I also remember him saying, 2,000 years ago, someone  
17 died on the Cross, shouldn't someone take a stand for  
18 Him now.

19 Q. Did he make any statements about the  
20 separation of church and state?

21 A. I believe so, yes.

22 Q. What did he say?

23 A. That the separation of church and state was  
24 a myth.

25 Q. Did the school board, on June 14th, take

1 action on the purchase of a new biology textbook?

2 A. No, I don't believe so.

3 Q. Forward to the next meeting the following  
4 month. Did you have a meeting with anyone about the  
5 purchase of a new biology textbook?

6 A. Yes, sometime in the middle of July.

7 Q. Who did you meet with?

8 A. It was Mrs. Spahr, myself, Mr. Baksa, and  
9 Dr. Nilsen was sort of in and out at that meeting.

10 Q. Was this meeting at the school  
11 administration office?

12 A. Yes. I think it was in Mr. Baksa's office.

13 Q. What was your understanding of the purpose  
14 of the meeting?

15 A. At that point I believe that the purchase of  
16 the textbooks was tabled because we found out that  
17 there was a 2004 edition of the Miller and Levine  
18 textbook, where we had ordered the 2002 edition, so  
19 now there was a brand-new edition.

20 So we were in his office to basically -- we  
21 had a copy of the 2004 edition, and we were comparing  
22 the 2002 edition to the 2004 edition.

23 Q. I'm going to take you back to what's been  
24 marked previously as the justification. You don't  
25 have to look for it. But you recall that you provided

1 a written justification for why the school district  
2 should move from the 1998 edition to the then new  
3 edition of 2002?

4 A. Yes.

5 Q. The justifications related to the entire  
6 book. Isn't that right?

7 A. Yes.

8 Q. When you met with Mr. Baksa and Mrs. Spahr  
9 in July, 2004, did you compare the entire 2002 edition  
10 to the entire 2004 edition?

11 A. No.

12 Q. Did you focus on any particular part?

13 A. Yes, the evolution chapters.

14 Q. And what did you do in that comparison?

15 A. We basically read over the evolution  
16 chapters word for word and compared what it said in  
17 the 2002 edition versus what it said in the 2004  
18 edition.

19 Q. I'm going to ask you to turn to Tab 150 and  
20 ask Matt to call up Plaintiffs' Exhibit 150. What is  
21 this document?

22 A. This is a written representation of the  
23 comparisons between the two books.

24 Q. Did you work on the preparation of this  
25 document?

1 A. Yes.

2 Q. Did Mr. Baksa work on it?

3 A. Yes.

4 Q. Did Mrs. Spahr?

5 A. Yes.

6 Q. Is this an accurate comparison between the  
7 two editions on the subject of teaching evolution?

8 A. Yes.

9 Q. At the same meeting did you receive a copy  
10 of the book entitled *Of Pandas and People*?

11 A. Yes.

12 MR. SCHMIDT: I think that's been marked and  
13 admitted, Your Honor, as Plaintiffs' Exhibit 11.

14 THE COURT: It has.

15 MR. SCHMIDT: May I approach the witness?

16 THE COURT: You may.

17 BY MR. SCHMIDT:

18 Q. Ms. Miller, I've shown you a copy of what's  
19 been marked as P11. Do you recognize that as a copy  
20 of *Pandas and People*?

21 A. Yes.

22 Q. If you would -- and I think this is probably  
23 in the record more than once -- but would you turn to  
24 the copyright page and tell us what the copyright date  
25 is on that book?

1 A. 1989 and 1993.

2 Q. When you were introduced, if that's the  
3 right word, to the book of *Pandas and People*, who gave  
4 it to you, Mr. Baksa or Mrs. Spahr?

5 A. Mr. Baksa.

6 Q. Did he say anything to you about why he was  
7 showing it to you or giving it to you?

8 A. Basically here's the book, I don't know,  
9 given to him, look over it, tell me what you think.

10 Q. Did you look it over?

11 A. Yes.

12 Q. Did you read the entire thing or portions of  
13 it?

14 A. There are introductory chapters, and then  
15 there are more in-depth chapters. I believe I read  
16 the introductory chapters. I think there are six of  
17 them.

18 Q. When Mr. Baksa gave it to you and said, look  
19 it over, tell me what you think, did he tell you at  
20 that time that this book was under consideration as a  
21 companion text to go along with the biology textbook?

22 A. No.

23 Q. Did he tell you at that time that *Of Pandas*  
24 was under consideration as a reference text to be  
25 placed anywhere in the school building?

1 A. No.

2 Q. What did Mr. Baksa tell you and Mrs. Spahr  
3 was going to happen with the biology textbook  
4 following your meeting in July?

5 A. I believe the next board meeting was  
6 sometime in the beginning of August, and it would be  
7 up -- the 2004 edition of the book would be voted on  
8 at that meeting.

9 Q. Would you have liked to have the textbook  
10 you were going to be using in the school year  
11 beginning in September in your hands before August?

12 A. Yes. We were concerned because, again, the  
13 students were coming to us at the end of August, and  
14 our textbooks were still not in place, and we would  
15 like time to look over the textbooks and prepare  
16 lessons and things from our new textbook.

17 Q. Now, I want to take you back to *Pandas* for a  
18 minute. You said you read parts of it but not the  
19 entire book.

20 A. Right.

21 Q. What was your impression of *Pandas* as a  
22 science book when you read the parts that you did?

23 A. Two things that I focused on. The first one  
24 was that when I read it, with my biology degree, I had  
25 trouble reading some of it. I thought it was very

1 high-level text, and I was concerned. I didn't know  
2 what -- you know, where this textbook was going, you  
3 know, if students were supposed to be reading it, that  
4 it would be too high of a level for my ninth graders  
5 to read. I also had questions, I guess, on some of  
6 the science in it, some of the conclusions, I guess I  
7 want to say, that it made in the book and how  
8 science-related they were.

9 Q. Were you at all concerned about the fact  
10 that the book you were replacing was a 1998 copyright,  
11 this was a 1993 copyrighted science book?

12 A. Yes. There was a -- there was some  
13 discussion on, you know, even if it's an old -- at our  
14 first curriculum committee meeting, even if it's a  
15 newer book, if it's very similar to the old book, it  
16 doesn't necessarily warrant getting a new book. So  
17 here we had an outdated book, so, yes, we were  
18 concerned about the year.

19 Q. Did you do anything formal to sort of test  
20 your first impression that this might be hard going  
21 for a ninth-grade student?

22 A. Yes.

23 Q. What did you do?

24 A. I went online and found two different Web  
25 sites that allow you to do what's called a readability

1 study of the text.

2 Q. Was doing a readability study something that  
3 you learned how to do when you got either your  
4 bachelor's or your master's degree?

5 A. Yes.

6 Q. Go on, now. What did you do when you had  
7 that material available?

8 A. Basically a readability study is you take  
9 random samplings from a text and you look at how many  
10 words are in a sentence, how many syllables are in  
11 each word, and you plug them in, and they -- it's a  
12 formula, and they spit it back to you, basically, on  
13 how -- what the level of the reading is, whether it's  
14 a third-grade level, you know, fifth-grade level,  
15 twelfth-grade level.

16 Q. Do you recall what the results were of the  
17 readability study you did?

18 A. Yes. Both of them that I did it was 12  
19 plus, which would have been grade level 12 plus.

20 Q. Okay. Now, moving forward, did you learn  
21 sometime after the August school board meeting that  
22 the purchase of the 2004 edition of *Biology* had been  
23 approved?

24 A. Yes.

25 Q. Did you attend a curriculum committee

1 meeting with the board curriculum committee members  
2 late in the month of August?

3 A. Yes.

4 Q. Who else was at the meeting?

5 A. Let's see. That was -- I believe the board  
6 curriculum members, I believe Dr. Nilsen was at that  
7 meeting, Mr. Baksa. I believe at that time it would  
8 have been our new principal, Mr. Riedel, and, again,  
9 at least Mrs. Spahr, Mr. Eshbach, and myself. There  
10 may have been other science department members there.

11 Q. What was the principal subject of the  
12 meeting on the -- is it the 30th of August?

13 A. I believe so.

14 Q. What was the principal subject of that  
15 meeting?

16 A. The *Of Pandas* book and how it was going to  
17 be used in the classroom.

18 Q. Was the *Pandas* book the first substantive  
19 contact you had had with intelligent design?

20 A. Yes.

21 Q. Was that subject something that was  
22 discussed at the meeting on August 30th, intelligent  
23 design?

24 A. Yes.

25 Q. Was there any concern expressed by anyone at

1 that meeting about using a book that conveyed  
2 intelligent design material?

3 A. Yes.

4 Q. What was that discussion?

5 A. I believe it was Mrs. Spahr had documents  
6 that were evaluating whether or not you could present  
7 intelligent design in a science classroom. So there  
8 was some discussion of is it science, you know, is it  
9 appropriate to place in a biology -- or science  
10 classroom.

11 Q. As you recall that discussion and the  
12 concerns that Mrs. Spahr expressed, how would you  
13 describe those concerns in your own words? What was  
14 the problem with teaching intelligent design in a  
15 biology class?

16 A. It was -- intelligent design, you know, from  
17 the textbook says basically that life is, I guess,  
18 created by an intelligent designer. And we knew  
19 through my science classes and education classes in my  
20 undergraduate work that creationism was not allowed to  
21 be taught. And we just felt that it was too close to  
22 creationism to be comfortable in our classroom, to  
23 present it in our classroom.

24 Q. As a biology teacher, were you comfortable  
25 with your students having *Of Pandas and People* as a

1 companion textbook?

2 A. No. I believe at that meeting sort of the  
3 end result was if we had to compromise, this book was  
4 coming as a reference text was our compromise instead  
5 of having it in the hand of every student.

6 Q. Why did you accept that compromise?

7 A. We felt like, again, we were, you know, all  
8 throughout this -- earlier we had agreed to say that  
9 we'd point out some areas of evolution that don't have  
10 as much evidence. That was our compromise first. And  
11 then this came, and we felt that it was being, you  
12 know, pushed, so we felt, well, if we compromise,  
13 maybe this will go away again.

14 Q. Even with the compromise that you've just  
15 described where it's in the class as a reference book  
16 and not a companion text, did you have any sense from  
17 the curriculum committee about how you were to use *Of*  
18 *Pandas and People*?

19 A. Not at that point. I think there were still  
20 questions of how we were to use it.

21 Q. Was there any discussion at the meeting on  
22 August 30th about changing the biology curriculum?

23 A. No.

24 Q. Going forward to another meeting. Did you  
25 attend the October 18th meeting of the Dover School

1 Board?

2 A. Yes.

3 Q. Did the school board, at that meeting,  
4 change the biology curriculum?

5 A. Yes.

6 Q. Turn to Tab 135. What is that document?

7 A. Our biology curriculum.

8 Q. And if you would, turn to -- sorry, Your  
9 Honor. The page numbers are Bates stamped on the  
10 bottom. 1646, can you find that?

11 A. Yes.

12 Q. Does the change that was approved by the  
13 board on October 18th appear on that page of 136?

14 A. Yes.

15 Q. Where does it appear?

16 A. At the very bottom.

17 Q. This page is set up with a number of columns  
18 that convey the amount of time, the content and  
19 concepts that are to be taught, the state standard.  
20 Right?

21 A. Yes.

22 Q. And let me ask you about the state standard.  
23 There is a reference to a state standard in that  
24 column?

25 A. Yes.

1 Q. If we were to look at the state standard,  
2 would we find any mention there of intelligent design?

3 A. No.

4 Q. The next column talks about instructional  
5 strategies. What instructional strategy was to be  
6 followed?

7 A. Lecture.

8 Q. And what resource is identified?

9 A. *Of Pandas and People*.

10 Q. Is there anyplace else in the biology  
11 curriculum, if we went through it page by page, where  
12 we would find a resource identified by specific title  
13 other than *Of Pandas and People*?

14 A. Other than our textbook is listed. And we  
15 just generically said "textbook" because this is to  
16 stay throughout whatever textbook we use.

17 Q. Was there any comment made by a board member  
18 named Heather Geesey at the October 18th meeting about  
19 teachers being fired?

20 A. Yes.

21 Q. What do you recall she said?

22 A. My recollection is something was said, I  
23 believe it was by Mr. Brown, something about the  
24 addition of this being sued or something like that, do  
25 they have the right to sue us. And Mrs. Geesey said,

1 well, if the teachers sue us, then they should be  
2 fired because they agreed with this.

3 Q. Did you respond to that comment?

4 A. Yes.

5 Q. What did you do?

6 A. When she said that, it caused me to jump out  
7 of my seat, and I ran to the podium and basically said  
8 the teachers did not agree with this addition of  
9 intelligent design into our curriculum.

10 Q. At that meeting of the 18th, was there any  
11 discussion by the members of the board about why the  
12 curriculum change was being made?

13 A. No.

14 Q. Was there any discussion by any member of  
15 the board at any other time or any explanation  
16 provided about why the curriculum change was being  
17 made?

18 A. No. The only thing we knew was their  
19 problem with evolution and the origin of life.

20 Q. I've mentioned the board, but the school  
21 also has administration. Let me ask the same  
22 question. Was there ever any explanation given by the  
23 administration of the school district about why this  
24 curriculum change was being made?

25 A. No.

1 Q. Did anybody ever explain how it improved  
2 teaching science or biology in the school district?

3 A. No.

4 Q. Now, after the board meeting, a number of  
5 other things happened, and let me take you through a  
6 few additional exhibits. If you would turn to Exhibit  
7 Tab P692.

8 A. Okay.

9 Q. Have you seen a document, at least something  
10 containing this material, before?

11 A. Yes.

12 Q. What is it?

13 A. It was a draft sent to us, you can see at  
14 the top, by Mrs. Spahr of -- basically it says what's  
15 going to be read to all biology classes.

16 Q. Do you know who originated this draft?

17 A. Mr. Baksa.

18 Q. Were you asked to do anything with this  
19 draft?

20 A. Yes.

21 Q. What were you asked to do?

22 A. Look it over, make changes, tell me what you  
23 think again.

24 Q. All right. Who directed you to do that job?

25 A. Mr. Baksa.

1 Q. Turn now, if you would, to Plaintiffs'  
2 Exhibit 94, which is at Tab 94 in your book. You'll  
3 find it closer to the front.

4 A. Okay.

5 Q. Do you recognize this document?

6 A. Yes.

7 Q. What is it?

8 A. This is my notes of changes that I was  
9 instructed to make.

10 Q. What did you do with these changes?

11 A. I sent them, I think via e-mail, to  
12 Mr. Baksa.

13 Q. Turn, if you would, to Exhibit 98.

14 A. Okay.

15 Q. Is that the typed version of the handwritten  
16 changes we saw in the previous exhibit?

17 A. Yes. This is what I actually sent to him.

18 Q. All right. There's handwriting on this  
19 page. Do you recognize the handwriting?

20 A. Yes.

21 Q. Whose is it?

22 A. Mine.

23 Q. Some of the type on this page is in  
24 boldface. What does that signify?

25 A. I bolded the areas that -- where I may have

1 added words or changed things around.

2 Q. Are -- well, let me ask you this question.  
3 What does your handwriting convey to the person  
4 looking at this document?

5 A. I went over how many things, I guess, that I  
6 had changed and circled those. And then I compared, I  
7 guess, my version with the version that was  
8 eventually -- I don't want to say voted on, but the  
9 version that was eventually presented and put in where  
10 things were taken out or where they removed pieces of  
11 mine and that kind of thing.

12 Q. There are some numbers and circles.

13 A. Yes.

14 Q. What do they signify?

15 A. I believe those were the changes that I  
16 made, or the boldface is the changes that I sent.

17 Q. Okay. And so when you say on this document  
18 they removed or they took out, that's what you were  
19 seeing as a comparison between your proposal and the  
20 ultimate version?

21 A. Yes.

22 Q. Okay. Let me ask you to turn to Tab 100 and  
23 just tell us what this is. Is that another review  
24 of --

25 A. Yes.

1 Q. -- this draft?

2 A. Yes. I believe this is almost a final copy,  
3 yes.

4 Q. Now, one more on this. If you would turn  
5 forward on Plaintiffs' Exhibit 110.

6 A. Okay.

7 Q. The first page of that is a memorandum --

8 A. Yes.

9 Q. -- from Mr. Baksa. You received a copy?

10 A. Yes.

11 Q. Dated December 7, 2004?

12 A. Right.

13 Q. And what is that forwarding and is that part  
14 of this exhibit?

15 A. Telling us that before we get to the  
16 chapters on evolution, we are to read this statement  
17 here.

18 Q. And is the document that appears behind this  
19 memorandum the final version of the statement that was  
20 to be read to students?

21 A. Yes.

22 Q. You've talked a little bit about your  
23 involvement in discussions with Mr. Bonsell,  
24 Mr. Buckingham, curriculum committee, where issues  
25 have come up about teaching evolution, issues have

1 come up about how to use *Pandas*, and you described at  
2 least one or two compromises along the way.

3 A. Yes.

4 Q. Why did you work on the statement that was  
5 to be read to students?

6 A. I was directed to by Mr. Baksa, who is my  
7 superior. And the original version I thought held --  
8 well, was lacking in some of the, I guess, validity,  
9 or some of the statements were inaccurate, I thought.  
10 So if it was going to be presented to the students,  
11 that it should at least be accurate.

12 Q. Okay. Turn, if you would, to Exhibit 104,  
13 which is behind Tab 104.

14 A. Okay.

15 Q. What is this?

16 A. This is a press release. I think it was on  
17 the Web site, district Web site, about --

18 Q. What was the -- sorry.

19 A. About the biology curriculum and what was to  
20 be read to the students.

21 Q. What is the date of the first posting of  
22 this press release?

23 A. 11/19/04.

24 Q. I'd ask you to look down to the last  
25 paragraph before the final indented material at the

1 bottom that starts, In coordination.

2 A. Okay.

3 Q. Do you see that?

4 A. Yes.

5 Q. Will you read that aloud into the record?

6 A. (Reading:) In coordination with the science  
7 department teachers, the district solicitor, and the  
8 school board, Mr. Michael Baksa, the assistant  
9 superintendent in charge of curriculum, developed the  
10 following procedural statement that will be read to  
11 all students as the new biology curriculum is  
12 implemented beginning in January, 2005.

13 Q. Is that an entirely accurate statement?

14 A. We did not think -- we didn't like the "in  
15 coordination with the science department teachers"  
16 part.

17 Q. Did you believe that was an inaccurate  
18 statement?

19 A. Yes.

20 Q. What did you do about it as science  
21 teachers?

22 A. We wrote a letter to Dr. Nilsen, I believe,  
23 that stated that we weren't -- we think that the "in  
24 coordination with the science teachers" sort of  
25 misrepresented what factor we had to play in it.

1 Q. Let me ask you to turn to Tab 106.

2 A. Okay.

3 Q. What is this document?

4 A. That's the letter that we sent to  
5 Dr. Nilsen.

6 Q. Would you read this, since it's only one  
7 paragraph long, into the record, please?

8 A. Sure. (Reading:) Dear Richard Nilsen:  
9 Contained in the most recent press release regarding  
10 the biology curriculum, the following was stated: The  
11 assistant superintendent in charge of curriculum  
12 development, Mr. Baksa, in coordination with the  
13 science department teachers, the district solicitor,  
14 and the school board, has developed the following  
15 procedural statement to use in implementing the new  
16 biology curriculum language. The science department  
17 members strongly object to this statement. To  
18 reiterate what was verbally indicated to Mr. Baksa  
19 upon returning the draft of the procedural statement  
20 and in an effort to honor your request as not to be  
21 deemed insubordinate for input, the science department  
22 corrected the statement to ensure it was factually  
23 correct from a scientific standpoint. This was by no  
24 means giving our consent or agreement to the  
25 development of this statement. Since the science

1 department had no input in this press release, we are  
2 asking a correction be released to the media.

3 Q. Did you help prepare this document?

4 A. Yes.

5 Q. Is your signature on it?

6 A. Yes.

7 Q. Did you send it?

8 A. Yes.

9 Q. The statement that was to be read to  
10 students was something that, as originally prepared,  
11 was to be read by teachers. Is that correct?

12 A. Yes.

13 THE COURT: If you have a substantial amount  
14 more, Mr. Schmidt, we probably should take a break.  
15 If you think you can wrap it up in the next five or  
16 ten minutes, your direct -- and I don't want to hold  
17 you to that.

18 MR. SCHMIDT: No, I'm willing to be held,  
19 Your Honor. I only have a few more questions.

20 THE COURT: All right. Well, let's wrap  
21 that up, and then we'll break and have cross this  
22 afternoon. You may proceed.

23 BY MR. SCHMIDT:

24 Q. Ms. Miller, did you actually read that  
25 statement to your students in the ninth-grade biology

1 class?

2 A. No.

3 Q. Did you refuse to read it?

4 A. Yes.

5 Q. I'd like you to turn to a document that's  
6 been marked Plaintiffs' Exhibit 121.

7 A. Okay.

8 Q. What is this document?

9 A. This is a document sent to Dr. Nilsen where  
10 the science teachers were asking to be -- to basically  
11 opt out of reading that statement to the biology  
12 classes.

13 Q. Did you have a hand in preparing this  
14 document?

15 A. Yes.

16 Q. Do you agree with it?

17 A. Yes.

18 Q. Look down at the second paragraph from the  
19 bottom before the boldface. Do you see that?

20 A. Yes.

21 Q. Would you read that paragraph into the  
22 record?

23 A. The one that starts, Central to the  
24 teaching?

25 Q. Yes, please.

1           A.   (Reading:) Central to the Teaching Act and  
2 our ethical obligation is the solemn responsibility to  
3 teach the truth. Section 235.10 guides our  
4 relationships with students and provides that the  
5 professional educator may not knowingly and  
6 intentionally misrepresent subject matter or  
7 curriculum.

8           Q.   And why, guided by that principle, did you  
9 refuse to read the statement to your students?

10          A.   By us reading the statement to our students,  
11 it essentially was -- it was going to be very  
12 contradictory to the students by saying, number one,  
13 that intelligent design is science, which we didn't  
14 believe it was, and that would be misrepresenting a  
15 subject matter.

16                And, number two, if I'm telling the students  
17 that I'm going to teach evolution, which is very  
18 important and they're going to be tested on it, but  
19 yet ask them to go and read *Of Pandas and People*,  
20 which says that evolution didn't occur, to me that's  
21 confusing for the students. It's contradictory to do  
22 both. Okay? For them to be tested on evolution but  
23 yet say evolution didn't occur confused our students  
24 and would misrepresent how important evolutionary  
25 theory is to the students.

1                   MR. SCHMIDT:  Nothing further on direct,  
2                   Your Honor.

3                   THE COURT:  All right.  Thank you,  
4                   Mr. Schmidt.  We will now recess for lunch until --  
5                   why don't we say about five of 2:00.  That will give  
6                   us an hour and a half.  And we'll take up the exhibits  
7                   first thing for Professor Forrest when we return.  And  
8                   obviously we won't have the exhibits for this witness  
9                   until we finish direct and cross.  So we'll be in  
10                  recess until 1:55 p.m. this afternoon.

11                  (A luncheon recess was taken.)

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CERTIFICATION

I hereby certify that the proceedings and evidence are contained fully and accurately in the notes taken by me on the within proceedings and that this copy is a correct transcript of the same.

Dated in Harrisburg, Pennsylvania, this 6th day of October, 2005.

**/s/ Lori A. Shuey**  
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