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

TAMMY KITZMILLER, et al.	:	Case No. 04cv2688
	:	
Plaintiffs	:	Judge Jones
	:	
v.	:	
	:	
DOVER AREA SCHOOL DISTRICT, et al.,	:	
	:	
Defendants.	:	

MEMORANDUM OPINION

December 20, 2005

INTRODUCTION:

On October 18, 2004, the Defendant Dover Area School Board of Directors passed by a 6-3 vote the following resolution:

> Students will be made aware of gaps/problems in Darwin's theory and of other theories of evolution including, but not limited to, intelligent design.
> Note: Origins of Life is not taught.

On November 19, 2004, the Defendant Dover Area School District announced by press release that, commencing in January 2005, teachers would be required to read the following statement to students in the ninth grade biology class at Dover High School:

> The Pennsylvania Academic Standards require students to learn about Darwin's Theory of Evolution and

> eventually to take a standardized test of which evolution is a part.
>
> Because Darwin's Theory is a theory, it continues to be tested as new evidence is discovered. The Theory is not a fact. Gaps in the Theory exist for which there is no evidence. A theory is defined as a well-tested explanation that unifies a broad range of observations.
>
> Intelligent Design is an explanation of the origin of life that differs from Darwin's view. The reference book, Of Pandas and People, is available for students who might be interested in gaining an understanding of what Intelligent Design actually involves.
>
> With respect to any theory, students are encouraged to keep an open mind. The school leaves the discussion of the Origins of Life to individual students and their families. As a Standards-driven district, class instruction focuses upon preparing students to achieve proficiency on Standards-based assessments.

A. Background and Procedural History

On December 14, 2004, Plaintiffs filed the instant suit challenging the constitutional validity of the October 18, 2004 resolution and November 19, 2004 press release (collectively, "the ID Policy"). It is contended that the ID Policy constitutes an establishment of religion prohibited by the First Amendment to the United States Constitution, which is made applicable to the states by the Fourteenth Amendment, as well as the Constitution of the Commonwealth of Pennsylvania. Plaintiffs seek declaratory and injunctive relief, nominal damages,

costs, and attorneys' fees.

This Court's jurisdiction arises under 28 U.S.C. §§ 1331, 1343, and 42 U.S.C. § 1983. In addition, the power to issue declaratory judgments is expressed in 28 U.S.C. §§ 2201 and 2202. This Court has supplemental jurisdiction over Plaintiffs' cause of action arising under the Constitution of the Commonwealth of Pennsylvania pursuant to 28 U.S.C. § 1367. Venue is proper in this District under 28 U.S.C. § 1391(b) because one or more Defendants reside in this District, all Defendants reside in the Commonwealth of Pennsylvania, and the events or omissions giving rise to the claims at issue occurred in this District.

For the reasons that follow, we hold that the ID Policy is unconstitutional pursuant to the Establishment Clause of the First Amendment of the United States Constitution and Art. I, § 3 of the Pennsylvania Constitution.

B. The Parties to the Action

We will now introduce the individual Plaintiffs and provide information regarding their acquaintance with the biology curriculum controversy.[1] Tammy

[1] Defendants again argue that certain Plaintiffs lack standing and their claims should therefore be dismissed. First, Defendants contend that Plaintiffs Eveland and Sneath lack standing because their claims are not ripe, based upon the age of their children. Defendants originally asserted this argument in submissions regarding their previously filed Motion to Dismiss. In our March 10, 2005 Order disposing of such Motion, we discussed that issue in detail and held that Plaintiffs Eveland and Sneath should not be dismissed based upon ripeness grounds. (Rec. Doc. 41 at 21-23). We have been presented with no reason to alter our prior ruling in this regard.

Kitzmiller, resident of Dover, Pennsylvania is a parent of a child in the ninth grade and a child in the eleventh grade at Dover High School.[2] She did not attend any Board meetings until November 2004 and first learned of the biology curriculum controversy from reading the local newspapers. Bryan and Christy Rehm, residents of Dover, Pennsylvania are parents of a child in the eighth grade, a child in the second grade, a child in kindergarden in the Dover Area School District, and a child of pre-school age. They intend for their children to attend Dover High School. Bryan Rehm learned of the biology curriculum controversy by virtue of being a member of the science faculty at Dover Area High School. Before and after his resignation, he regularly attended Board meetings. His wife, fellow Plaintiff Christy Rehm learned of the biology curriculum controversy by virtue of

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Defendants also argue that the Callahan Plaintiffs and Plaintiff Smith lack standing based upon mootness grounds as their children have already passed the ninth grade. In our March 10, 2005 Order, we addressed this issue and found it premature to dismiss Plaintiff Smith and the Callahan Plaintiffs. We explained that we would entertain a renewed motion at a point at which the record is more fully developed. Id. at 23-25. In Defendants' Motion for Summary Judgment they raised the issue of standing by way of footnote and subsequently raised it in their post-trial submissions. We find the cases cited by Defendants to be factually distinguishable and conclude that Defendants frame the Establishment Clause claim far too narrowly. Although students subjected to the ID Policy in the classroom are affected most directly, courts have never defined Establishment Clause violations in public schools so narrowly as to limit standing to only those students immediately subjected to the offensive content. See Santa Fe Independent Sch. Dist. v. Doe, 530 U.S. 290, 313-14 (2000) (very adoption or passage of a policy that violates the Establishment Clause represents a constitutional injury). We therefore find that all Plaintiffs have standing to bring their claims in this action.

[2] We note that the ages of Plaintiffs' children are expressed as of the time this lawsuit was filed in December 2004.

discussions she had with her husband and also regularly attended Board meetings in 2004. Deborah F. Fenimore and Joel A. Leib, residents of Dover, Pennsylvania are the parents of a child in the twelfth grade at Dover High School and a child in the seventh grade in the Dover Area School District. They intend for their seventh grade child to attend Dover High School. Leib first learned of a change in the biology curriculum by reading local newspapers. Steven Stough, resident of Dover, Pennsylvania is a parent of a child in the eighth grade in the Dover Area School District and intends for his child to attend Dover High School. Stough did not attend any Board meetings until December 2004 and prior to that, he had learned of the biology curriculum change by reading the local newspapers. Beth A. Eveland, resident of York, Pennsylvania is a parent of a child in the first grade in the Dover Area School District and a child of pre-school age who intends for her children to attend Dover High School. Eveland attended her first Board meeting on June 14, 2004. Prior to that, she had learned of the issues relating to the purchase of the biology books from reading the York Daily Record newspaper. Cynthia Sneath, resident of Dover, Pennsylvania is a parent of a child in the first grade in the Dover Area School District and a child of pre-school age who intends for her children to attend Dover High School. Sneath attended her first Board meeting on October 18, 2004 and prior to that, she had learned of the biology

curriculum controversy from reading the local newspapers. Julie Smith, resident of York, Pennsylvania is a parent of a child in the tenth grade at Dover High School. Smith did not attend a Board meeting in 2004; she learned of and followed the biology curriculum controversy by reading the local newspapers. Aralene (hereinafter "Barrie") Callahan and Frederick B. Callahan, residents of Dover, Pennsylvania are parents of a child in the tenth grade at Dover High School. Barrie Callahan learned of the biology curriculum controversy by virtue of her status of a former Board member and from attending Board meetings. Fred Callahan learned of the biology curriculum controversy based upon discussions with his wife Barrie and from attending Board meetings.

The Defendants include the Dover Area School District (hereinafter "DASD") and Dover Area School District Board of Directors (hereinafter "the Board") (collectively "Defendants"). Defendant DASD is a municipal corporation governed by a board of directors, which is the Board. The DASD is comprised of Dover Township, Washington Township, and Dover Borough, all of which are located in York County, Pennsylvania. There are approximately 3,700 students in the DASD, with approximately 1,000 attending Dover High School. (Joint Stip. of Fact ¶ 3).

The trial commenced September 26, 2005 and continued through November

4, 2005. This Memorandum Opinion constitutes the Court's findings of fact and conclusions of law which are based upon the Court's review of the evidence presented at trial, the testimony of the witnesses at trial, the parties' proposed findings of fact and conclusions of law with supporting briefs, other documents and evidence in the record, and applicable law.[3] Further orders and judgments will be in conformity with this opinion.

C. Federal Jurisprudential Legal Landscape

As we will review the federal jurisprudential legal landscape in detail below, we will accordingly render only an abbreviated summary of that terrain by way of an introduction at this juncture. The religious movement known as Fundamentalism began in nineteenth century America as a response to social changes, new religious thought and Darwinism. McLean v. Ark. Bd. of Educ., 529

[3] The Court has received numerous letters, amicus briefs, and other forms of correspondence pertaining to this case. The only documents submitted by third parties the Court has considered, however, are those that have become an official part of the record. Consistent with the foregoing, the Court has taken under consideration the following: (1) Brief of Amici Curiae Biologists and Other Scientists in Support of Defendants (doc. 245); (2) Revised Brief of Amicus Curiae, the Discovery Institute (doc. 301); (3) Brief of Amicus Curiae the Foundation for Thought and Ethics (doc. 309); and (4) Brief for Amicus Curiae Scipolicy Journal of Science and Health Policy (doc. 312).

The Court accordingly grants the outstanding Motions for Leave to File Amicus Briefs, namely the Motion for Leave to File a Revised Amicus Brief by The Discovery Institute (doc. 301), the Motion for Leave to File Amicus Brief by The Foundation for Thought and Ethics (doc. 309), and the Petition for Leave to File Amicus Curiae Brief by Scipolicy Journal of Science and Health Policy (doc. 312).

F. Supp. 1255, 1258 (E.D. Ark. 1982). Religiously motivated groups pushed state legislatures to adopt laws prohibiting public schools from teaching evolution, culminating in the Scopes "monkey trial" of 1925. McLean, 529 F.Supp. at 1259; see Scopes v. State, 154 Tenn. 105 (1927) (criminal prosecution of public-school teacher for teaching about evolution).

In 1968, a radical change occurred in the legal landscape when in Epperson v. Arkansas, 393 U.S. 97 (1968), the Supreme Court struck down Arkansas's statutory prohibition against teaching evolution. Religious proponents of evolution thereafter championed "balanced treatment" statutes requiring public-school teachers who taught evolution to devote equal time to teaching the biblical view of creation; however, courts realized this tactic to be another attempt to establish the Biblical version of the creation of man. Daniel v. Waters, 515 F.2d 485 (6th Cir. 1975).

Fundamentalist opponents of evolution responded with a new tactic suggested by Daniel's reasoning which was ultimately found to be unconstitutional under the First Amendment, namely, to utilize scientific-sounding language to describe religious beliefs and then to require that schools teach the resulting "creation science" or "scientific creationism" as an alternative to evolution.

In Edwards v. Arkansas, 482 U.S. 578 (1987), five years after McLean, the

Supreme Court held that a requirement that public schools teach "creation science" along with evolution violated the Establishment Clause. The import of Edwards is that the Supreme Court turned the proscription against teaching creation science in the public school system into a national prohibition.

D. Consideration of the Applicability of the Endorsement and Lemon Tests to Assess the Constitutionality of the ID Policy

Having briefly touched upon the salient legal framework, it is evident that as the cases and controversies have evolved over time, so too has the methodology that courts employ in evaluating Establishment Clause claims. We initially observe that the Establishment Clause of the First Amendment of the United States Constitution provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof." U.S. Const. amend. I. The prohibition against the establishment of religion applies to the states through the Fourteenth Amendment. Modrovich v. Allegheny County, 385 F.3d 397, 400 (3d Cir. 2004); see also Wallace v. Jaffree, 472 U.S. 38, 49-50 (1985). The parties are in agreement that an applicable test in the case sub judice to ascertain whether the challenged ID Policy is unconstitutional under the First Amendment is that of Lemon v. Kurtzman, 403 U.S. 602 (1971), (hereinafter "the Lemon test"). See Edwards, 482 U.S. 578 (applying Lemon test to strike down Louisiana's "Creationism Act"); see also Epperson, 393 U.S. 97 (considering the

purpose and the primary effect of an Arkansas statute forbidding the teaching of evolution in public schools). Defendants, however, object to using the endorsement test, first arguing that it applies only to religious-display cases and most recently asserting that it applies to limited Establishment Clause cases, including a policy or practice in question that involves: a facially religious display, an overtly religious group or organization using government facilities, the provision of public funding or government resources to overly religious groups engaged in religious activity, or the permission of an overtly religious practice.

After a searching review of Supreme Court and Third Circuit Court of Appeals precedent, it is apparent to this Court that both the endorsement test and the Lemon test should be employed in this case to analyze the constitutionality of the ID Policy under the Establishment Clause, for the reasons that follow.

Since a majority of the Supreme Court first implemented the endorsement test in County of Allegheny v. ACLU, 492 U.S. 573 (1989), the Supreme Court and the Third Circuit have consistently applied the test to all types of Establishment Clause cases, notably cases involving religion in public-school settings. In Santa Fe Independent Sch. Dist. v. Doe, 530 U.S. 290 (2000), the Supreme Court applied the endorsement test to school-sponsored prayer at high school football games. In Santa Fe, the Supreme Court clearly defined the

endorsement test by noting that "[i]n cases involving state participation in a religious activity, one of the relevant questions is 'whether an objective observer, acquainted with the text, legislative history, and implementation of the statute, would perceive it as a state endorsement of prayer in public schools.'" Id. at 308. The Supreme Court then provided a more concrete explanation of how the test functions in the public-school context, explaining that:

> School sponsorship of a religious message is impermissible because it sends the ancillary message to members of the audience who are nonadherents 'that they are outsiders, not full members of the political community, and an accompanying message to adherents that they are insiders, favored members of the political community.'

Id. at 309-10 (quoting Lynch v. Donnelly, 465 U.S. 668, 688 (1984) (O'Connor, J., concurring)). In Zelman v. Simmons-Harris, 536 U.S. 639, 652-53 (2002), the Supreme Court applied the endorsement test to a school-voucher program. In Good News Club v. Milford Cent. Sch., 533 U.S. 98, 118-19 (2001), the Supreme Court applied the test to a school district's policy regarding a religious student club meeting on school property. In Mitchell v. Helms, 530 U.S. 793 (2000), and Agostini v. Felton, 521 U.S. 203 (1997), the Supreme Court applied the test to programs providing governmental aid to parochial schools. In Rosenberger v. Rector & Visitors of the University of Virginia, 515 U.S. 819, 841-42 (1995), the

Supreme Court applied the endorsement test to a public university's policy regarding funding a religious student newspaper.

Defendants maintain that this Court should not apply the endorsement test to the challenged ID Policy because the Supreme Court did not apply the test to the creationism statutes at issue in Epperson and Edwards. As Plaintiffs aptly state however, Epperson was decided in 1968, five years before Lemon, and accordingly nearly two decades before Justice O'Connor first began to articulate the endorsement test as a way to conceptualize Lemon. In addition, not only did Edwards likewise pre-date the test's adoption in Allegheny, but contrary to Defendants' assertion, the Supreme Court did invoke at least the endorsement concept in that case. See Edwards, 482 U.S. at 585 ("If the law was enacted for the purpose of endorsing religion, 'no consideration of the second or third criteria [of Lemon] is necessary.'") (quoting Wallace, 472 U.S. at 56). Moreover, it is notable that Edwards was a "purpose" case, so it would have been unnecessary for the Supreme Court to delve into a full-scale endorsement analysis even had the test existed at the time, as the test is most closely associated with Lemon's "effect" prong, rather than its "purpose" prong.

A review of the above cited Supreme Court cases reveals that none of them involve a challenge to a religious display, yet in each such case, the Supreme Court

reviewed the challenged governmental conduct to ascertain whether it constituted religious endorsement. Additionally, in each cited case, the Supreme Court reviewed a public school district's, or public university's, policy touching on religion. It is readily apparent to this Court that based upon Supreme Court precedent, the endorsement test must be utilized by us in our resolution of this case.

Applicable Third Circuit Court of Appeals precedent regarding application of the endorsement test to cases involving public school policies confirms our conclusion regarding its applicability to the instant dispute. In Child Evangelism Fellowship v. Stafford Township Sch. Dist., 386 F.3d 514 (3d Cir. 2004), the Third Circuit employed the endorsement test in considering whether a public school district would violate the Establishment Clause if it permitted religious groups to access students through a take-home-flyer system or a back-to-school night event. Also, in ACLU v. Black Horse Pike Reg'l Bd. of Educ., 84 F.3d 1471 (3d Cir. 1996), the Third Circuit applied the endorsement test in considering a challenge to a school board policy concerning whether prayer would be included in high school graduation ceremonies. In Black Horse Pike, the Third Circuit clearly stated that its duty was to "determine whether, under the totality of the circumstances, the challenged practice conveys a message favoring or disfavoring religion." Id. at

1486.

Our next task is to determine how to apply both the endorsement test and the Lemon test to the ID Policy. We are in agreement with Plaintiffs that the better practice is to treat the endorsement inquiry as a distinct test to be applied separately from, and prior to, the Lemon test. In recent Third Circuit cases, specifically, Freethought Society v. Chester County, 334 F.3d 247, 261 (3d Cir. 2003), Modrovich, 385 F.3d at 401-04, 406-13, and Child Evangelism, 386 F.3d at 530-35, the court adopted the practice of applying both tests. The Third Circuit conducted the endorsement inquiry first and subsequently measured the challenged conduct against Lemon's "purpose" and "effect" standards.[4]

We will therefore initially analyze the constitutionality of the ID Policy under the endorsement test and will then proceed to the Lemon test as it applies to this case.

E. Application of the Endorsement Test to the ID Policy

The endorsement test recognizes that when government transgresses the limits of neutrality and acts in ways that show religious favoritism or sponsorship, it violates the Establishment Clause. As Justice O'Connor first elaborated on this

[4] We do note that because of the evolving caselaw regarding which tests to apply, the "belt and suspenders" approach of utilizing both tests makes good sense. That said, it regrettably tasks us to make this narrative far longer than we would have preferred.

issue, the endorsement test was a gloss on Lemon that encompassed both the purpose and effect prongs:

> The central issue in this case is whether [the government] has endorsed [religion] by its [actions]. To answer that question, we must examine both what [the government] intended to communicate . . . and what message [its conduct] actually conveyed. The purpose and effect prongs of the Lemon test represent these two aspects of the meaning of the [government's] action.

Lynch, 465 U.S. at 690 (O'Connor, J., concurring).

As the endorsement test developed through application, it is now primarily a lens through which to view "effect," with purpose evidence being relevant to the inquiry derivatively. In Allegheny, the Supreme Court instructed that the word "endorsement is not self-defining" and further elaborated that it derives its meaning from other words that the Court has found useful over the years in interpreting the Establishment Clause. 492 U.S. at 593. The endorsement test emanates from the "prohibition against government endorsement of religion" and it "preclude[s] government from conveying or attempting to convey a message that religion or a particular religious belief is *favored* or *preferred*." Id. (citations omitted) (emphasis in original). The test consists of the reviewing court determining what message a challenged governmental policy or enactment conveys to a reasonable, objective observer who knows the policy's language, origins, and

legislative history, as well as the history of the community and the broader social and historical context in which the policy arose. McCreary County, Ky. v. ACLU, 125 S. Ct. 2722, 2736-37, 2005 U.S. LEXIS 5211 at *41 (2005) (objective observer "presumed to be familiar with the history of the government's actions and competent to learn what history has to show"); Santa Fe, 530 U.S. at 308 (objective observer familiar with "implementation of" governmental action); Selman, 390 F. Supp. 2d at 1306 (objective observer "familiar with the origins and context of the government-sponsored message at issue and the history of the community where the message is displayed").

In elaborating upon this "reasonable observer," the Third Circuit explained in Modrovich, 385 F.3d at 407, that "the reasonable observer is an informed citizen who is more knowledgeable than the average passerby." Moreover, in addition to knowing the challenged conduct's history, the observer is deemed able to "glean other relevant facts" from the face of the policy in light of its context. Id. at 407; accord Capitol Square Review & Advisory Bd. v. Pinette, 515 U.S. 753, 779-781 (1995) (O'Connor, J., concurring). Knowing the challenged policy's legislative history, the community's history, and the broader social and historical context in which the policy arose, the objective observer thus considers the publicly available evidence relevant to the purpose inquiry, but notably does not do so to ascertain,

strictly speaking, what the governmental purpose actually was. See, e.g., Selman, 390 F. Supp. 2d at 1306-07. Instead, the observer looks to that evidence to ascertain whether the policy "in fact conveys a message of endorsement or disapproval" of religion, irrespective of what the government might have intended by it. Lynch, 465 U.S. at 690 (O'Connor, J., concurring) ("The central issue in this case is whether [government] has endorsed Christianity by its [actions]. To answer that question, we must examine both what [the government] intended to communicate . . . and what message [its conduct] actually conveyed. The purpose and effect prongs of the Lemon test represent these two aspects of the meaning of the [government's] action."); Freiler v. Tangipahoa Parish Bd. of Educ., 975 F. Supp. 819 (E.D. La. 1997), aff'd, 185 F.3d 337 (5th Cir. 1999); Selman, 390 F. Supp. 2d at 1305-06.

We must now ascertain whether the ID Policy "in fact conveys a message of endorsement or disapproval" of religion, with the reasonable, objective observer being the hypothetical construct to consider this issue. Lynch, 465 U.S. at 690 (O'Connor, J., concurring). As the endorsement test is designed to ascertain the objective meaning of the statement that the District's conduct communicated in the community by focusing on how "the members of the listening audience" perceived the conduct, two inquiries must be made based upon the circumstances of this case.

Santa Fe, 530 U.S. at 308. First, we will consider "the message conveyed by the disclaimer to the students who are its intended audience," from the perspective of an objective Dover Area High School student. At a minimum, the pertinent inquiry is whether an "objective observer" in the position of a student of the relevant age would "perceive official school support" for the religious activity in question. Verbena United Methodist Church v. Chilton County Bd. of Educ., 765 F. Supp. 704, 711 (M.D. Ala. 1991) (quoting Bd. of Educ. of Westside Comm. Schools v. Mergens, 496 U.S. 226, 249 (1990)). We find it incumbent upon the Court to additionally judge Defendants' conduct from the standpoint of a reasonable, objective adult observer. This conclusion is based, in part, upon the revelation at trial that a newsletter explaining the ID Policy in detail was mailed by the Board to every household in the District, as well as the Board members' discussion and defense of the curriculum change in public school board meetings and in the media.

1. An Objective Observer Would Know that ID and Teaching About "Gaps" and "Problems" in Evolutionary Theory are Creationist, Religious Strategies that Evolved from Earlier Forms of Creationism

The history of the intelligent design movement (hereinafter "IDM") and the development of the strategy to weaken education of evolution by focusing students on alleged gaps in the theory of evolution is the historical and cultural background

against which the Dover School Board acted in adopting the challenged ID Policy. As a reasonable observer, whether adult or child, would be aware of this social context in which the ID Policy arose, and such context will help to reveal the meaning of Defendants' actions, it is necessary to trace the history of the IDM.

It is essential to our analysis that we now provide a more expansive account of the extensive and complicated federal jurisprudential legal landscape concerning opposition to teaching evolution, and its historical origins. As noted, such opposition grew out of a religious tradition, Christian Fundamentalism that began as part of evangelical Protestantism's response to, among other things, Charles Darwin's exposition of the theory of evolution as a scientific explanation for the diversity of species. McLean, 529 F. Supp. at 1258; see also, e.g., Edwards, 482 U.S. at 590-92. Subsequently, as the United States Supreme Court explained in Epperson, in an "upsurge of fundamentalist religious fervor of the twenties," 393 U.S. at 98 (citations omitted), state legislatures were pushed by religiously motivated groups to adopt laws prohibiting public schools from teaching evolution. McLean, 529 F. Supp. at 1259; see Scopes, 289 S.W. 363 (1927). Between the 1920's and early 1960's, anti-evolutionary sentiment based upon a religious social movement resulted in formal legal sanctions to remove evolution from the classroom. McLean, 529 F. Supp. at 1259 (discussing a subtle but pervasive

influence that resulted from anti-evolutionary sentiment concerning teaching biology in public schools).

As we previously noted, the legal landscape radically changed in 1968 when the Supreme Court struck down Arkansas's statutory prohibition against teaching evolution in Epperson. 393 U.S. 97. Although the Arkansas statute at issue did not include direct references to the Book of Genesis or to the fundamentalist view that religion should be protected from science, the Supreme Court concluded that "the motivation of the [Arkansas] law was the same . . . : to suppress the teaching of a theory which, it was thought, 'denied' the divine creation of man." Edwards, 482 U.S. at 590 (quoting Epperson, 393 U.S. at 109) (Arkansas sought to prevent its teachers from discussing the theory of evolution as it is contrary to the belief of some regarding the Book of Genesis.).

Post-Epperson, evolution's religious opponents implemented "balanced treatment" statutes requiring public school teachers who taught evolution to devote equal time to teaching the biblical view of creation; however, such statutes did not pass constitutional muster under the Establishment Clause. See, e.g., Daniel, 515 F.2d at 487, 489, 491. In Daniel, the Sixth Circuit Court of Appeals held that by assigning a "preferential position for the Biblical version of creation" over "any account of the development of man based on scientific research and reasoning," the

challenged statute officially promoted religion, in violation of the Establishment Clause. Id. at 489.

Next, and as stated, religious opponents of evolution began cloaking religious beliefs in scientific sounding language and then mandating that schools teach the resulting "creation science" or "scientific creationism" as an alternative to evolution. However, this tactic was likewise unsuccessful under the First Amendment. "Fundamentalist organizations were formed to promote the idea that the Book of Genesis was supported by scientific data. The terms 'creation science' and 'scientific creationism' have been adopted by these Fundamentalists as descriptive of their study of creation and the origins of man." McLean, 529 F. Supp. at 1259. In 1982, the district court in McLean reviewed Arkansas's balanced-treatment law and evaluated creation science in light of Scopes, Epperson, and the long history of Fundamentalism's attack on the scientific theory of evolution, as well as the statute's legislative history and historical context. The court found that creation science organizations were fundamentalist religious entities that "consider[ed] the introduction of creation science into the public schools part of their ministry." Id. at 1260. The court in McLean stated that creation science rested on a "contrived dualism" that recognized only two possible explanations for life, the scientific theory of evolution and biblical creationism,

treated the two as mutually exclusive such that "one must either accept the literal interpretation of Genesis or else believe in the godless system of evolution," and accordingly viewed any critiques of evolution as evidence that necessarily supported biblical creationism. Id. at 1266. The court concluded that creation science "is simply not science" because it depends upon "supernatural intervention," which cannot be explained by natural causes, or be proven through empirical investigation, and is therefore neither testable nor falsifiable. Id. at 1267. Accordingly, the United States District Court for the Eastern District of Arkansas deemed creation science as merely biblical creationism in a new guise and held that Arkansas' balanced-treatment statute could have no valid secular purpose or effect, served only to advance religion, and violated the First Amendment. Id. at 1264, 1272-74.

Five years after McLean was decided, in 1987, the Supreme Court struck down Louisiana's balanced-treatment law in Edwards for similar reasons. After a thorough analysis of the history of fundamentalist attacks against evolution, as well as the applicable legislative history including statements made by the statute's sponsor, and taking the character of organizations advocating for creation science into consideration, the Supreme Court held that the state violated the Establishment Clause by "restructur[ing] the science curriculum to conform with a particular

religious viewpoint." Edwards, 482 U.S. at 593.

Among other reasons, the Supreme Court in Edwards concluded that the challenged statute did not serve the legislature's professed purposes of encouraging academic freedom and making the science curriculum more comprehensive by "teaching all of the evidence" regarding origins of life because: the state law already allowed schools to teach any scientific theory, which responded to the alleged purpose of academic freedom; and if the legislature really had intended to make science education more comprehensive, "it would have encouraged the teaching of all scientific theories about the origins of humankind" rather than permitting schools to forego teaching evolution, but mandating that schools that teach evolution must also teach creation science, an inherently religious view. Id. at 586, 588-89. The Supreme Court further held that the belief that a supernatural creator was responsible for the creation of human kind is a religious viewpoint and that the Act at issue "advances a religious doctrine by requiring either the banishment of the theory of evolution from public school classrooms or the presentation of a religious viewpoint that rejects evolution in its entirety." Id. at 591, 596. Therefore, as noted, the import of Edwards is that the Supreme Court made national the prohibition against teaching creation science in the public school system.

The concept of intelligent design (hereinafter "ID"), in its current form, came into existence after the Edwards case was decided in 1987. For the reasons that follow, we conclude that the religious nature of ID would be readily apparent to an objective observer, adult or child.

We initially note that John Haught, a theologian who testified as an expert witness for Plaintiffs and who has written extensively on the subject of evolution and religion, succinctly explained to the Court that the argument for ID is not a new scientific argument, but is rather an old religious argument for the existence of God. He traced this argument back to at least Thomas Aquinas in the 13th century, who framed the argument as a syllogism: Wherever complex design exists, there must have been a designer; nature is complex; therefore nature must have had an intelligent designer. (Trial Tr. vol. 9, Haught Test., 7-8, Sept. 30, 2005). Dr. Haught testified that Aquinas was explicit that this intelligent designer "everyone understands to be God." Id. The syllogism described by Dr. Haught is essentially the same argument for ID as presented by defense expert witnesses Professors Behe and Minnich who employ the phrase "purposeful arrangement of parts."

Dr. Haught testified that this argument for the existence of God was advanced early in the 19th century by Reverend Paley and defense expert witnesses Behe and Minnich admitted that their argument for ID based on the "purposeful

arrangement of parts" is the same one that Paley made for design. (9:7-8 (Haught); Trial Tr. vol. 23, Behe Test., 55-57, Oct. 19, 2005; Trial Tr. vol. 38, Minnich Test., 44, Nov. 4, 2005). The only apparent difference between the argument made by Paley and the argument for ID, as expressed by defense expert witnesses Behe and Minnich, is that ID's "official position" does not acknowledge that the designer is God. However, as Dr. Haught testified, anyone familiar with Western religious thought would immediately make the association that the tactically unnamed designer is God, as the description of the designer in Of Pandas and People (hereinafter "Pandas") is a "master intellect," strongly suggesting a supernatural deity as opposed to any intelligent actor known to exist in the natural world. (P-11 at 85). Moreover, it is notable that both Professors Behe and Minnich admitted their personal view is that the designer is God and Professor Minnich testified that he understands many leading advocates of ID to believe the designer to be God. (21:90 (Behe); 38:36-38 (Minnich)).

Although proponents of the IDM occasionally suggest that the designer could be a space alien or a time-traveling cell biologist, no serious alternative to God as the designer has been proposed by members of the IDM, including Defendants' expert witnesses. (20:102-03 (Behe)). In fact, an explicit concession that the intelligent designer works outside the laws of nature and science and a

direct reference to religion is Pandas' rhetorical statement, "what kind of intelligent agent was it [the designer]" and answer: "On its own science cannot answer this question. It must leave it to religion and philosophy." (P-11 at 7; 9:13-14 (Haught)).

A significant aspect of the IDM is that despite Defendants' protestations to the contrary, it describes ID as a religious argument. In that vein, the writings of leading ID proponents reveal that the designer postulated by their argument is the God of Christianity. Dr. Barbara Forrest, one of Plaintiffs' expert witnesses, is the author of the book Creationism's Trojan Horse. She has thoroughly and exhaustively chronicled the history of ID in her book and other writings for her testimony in this case. Her testimony, and the exhibits which were admitted with it, provide a wealth of statements by ID leaders that reveal ID's religious, philosophical, and cultural content. The following is a representative grouping of such statements made by prominent ID proponents.[5]

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[5] Defendants contend that the Court should ignore all evidence of ID's lineage and religious character because the Board members do not personally know Jon Buell, President of the Foundation for Thought and Ethics (hereinafter "FTE"), the publisher of Pandas, or Phillip Johnson, nor are they familiar with the Wedge Document or the drafting history of Pandas. Defendants' argument lacks merit legally and logically.

The evidence that Defendants are asking this Court to ignore is exactly the sort that the court in McLean considered and found dispositive concerning the question of whether creation science was a scientific view that could be taught in public schools, or a religious one that could not. The McLean court considered writings and statements by creation science advocates like Henry Morris and Duane Gish, as well as the activities and mission statements of creationist

Phillip Johnson, considered to be the father of the IDM, developer of ID's "Wedge Strategy," which will be discussed below, and author of the 1991 book entitled Darwin on Trial, has written that "theistic realism" or "mere creation" are defining concepts of the IDM. This means "that God is objectively real as Creator and recorded in the biological evidence . . ." (Trial Tr. vol. 10, Forrest Test., 80-81, Oct. 5, 2005; P-328). In addition, Phillip Johnson states that the "Darwinian theory of evolution contradicts not just the Book of Genesis, but every word in the Bible from beginning to end. It contradicts the idea that we are here because a creator brought about our existence for a purpose." (11:16-17 (Forrest); P-524 at 1). ID proponents Johnson, William Dembski, and Charles Thaxton, one of the editors of Pandas, situate ID in the Book of John in the New Testament of the Bible, which begins, "In the Beginning was the Word, and the Word was God." (11:18-20, 54-55 (Forrest); P-524; P-355; P-357). Dembski has written that ID is a "ground clearing operation" to allow Christianity to receive serious consideration, and "Christ is never an addendum to a scientific theory but always a completion."

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think-tanks like the Biblic Science Association, the Institution for Creation Research, and the Creation Science Research Center. McLean, 529 F. Supp. at 1259-60. The court did not make the relevance of such evidence conditional on whether the Arkansas Board of Education knew the information. Instead, the court treated the evidence as speaking directly to the threshold question of what creation science was. Moreover, in Edwards, the Supreme Court adopted McLean's analysis of such evidence without reservation, and without any discussion of which details about creation science the defendant school board actually knew. Edwards, 482 U.S. at 590 n.9.

(11:50-53 (Forrest); P-386; P-390). Moreover, in turning to Defendants' lead expert, Professor Behe, his testimony at trial indicated that ID is only a scientific, as opposed to a religious, project for him; however, considerable evidence was introduced to refute this claim. Consider, to illustrate, that Professor Behe remarkably and unmistakably claims that the *plausibility of the argument for ID depends upon the extent to which one believes in the existence of God*. (P-718 at 705) (emphasis added). As no evidence in the record indicates that any other scientific proposition's validity rests on belief in God, nor is the Court aware of any such scientific propositions, Professor Behe's assertion constitutes substantial evidence that in his view, as is commensurate with other prominent ID leaders, ID is a religious and not a scientific proposition.

Dramatic evidence of ID's religious nature and aspirations is found in what is referred to as the "Wedge Document." The Wedge Document, developed by the Discovery Institute's Center for Renewal of Science and Culture (hereinafter "CRSC"), represents from an institutional standpoint, the IDM's goals and objectives, much as writings from the Institute for Creation Research did for the earlier creation-science movement, as discussed in McLean. (11:26-28 (Forrest)); McLean, 529 F. Supp. at 1255. The Wedge Document states in its "Five Year Strategic Plan Summary" that the IDM's goal is to replace science as currently

practiced with "theistic and Christian science." (P-140 at 6). As posited in the Wedge Document, the IDM's "Governing Goals" are to "defeat scientific materialism and its destructive moral, cultural, and political legacies" and "to replace materialistic explanations with the theistic understanding that nature and human beings are created by God." Id. at 4. The CSRC expressly announces, in the Wedge Document, a program of Christian apologetics to promote ID. A careful review of the Wedge Document's goals and language throughout the document reveals cultural and religious goals, as opposed to scientific ones. (11:26-48 (Forrest); P-140). ID aspires to change the ground rules of science to make room for religion, specifically, beliefs consonant with a particular version of Christianity.

In addition to the IDM itself describing ID as a religious argument, ID's religious nature is evident because it involves a supernatural designer. The courts in Edwards and McLean expressly found that this characteristic removed creationism from the realm of science and made it a religious proposition. Edwards, 482 U.S. at 591-92; McLean, 529 F. Supp. at 1265-66. Prominent ID proponents have made abundantly clear that the designer is supernatural.

Defendants' expert witness ID proponents confirmed that the existence of a supernatural designer is a hallmark of ID. First, Professor Behe has written that by

ID he means "not designed by the laws of nature," and that it is "implausible that the designer is a natural entity." (P-647 at 193; P-718 at 696, 700). Second, Professor Minnich testified that for ID to be considered science, the ground rules of science have to be broadened so that supernatural forces can be considered. (38:97 (Minnich)). Third, Professor Steven William Fuller testified that it is ID's project to change the ground rules of science to include the supernatural. (Trial Tr. vol. 28, Fuller Test., 20-24, Oct. 24, 2005). Turning from defense expert witnesses to leading ID proponents, Johnson has concluded that science must be redefined to include the supernatural if religious challenges to evolution are to get a hearing. (11:8-15 (Forrest); P-429). Additionally, Dembski agrees that science is ruled by methodological naturalism and argues that this rule must be overturned if ID is to prosper. (Trial Tr. vol. 5, Pennock Test., 32-34, Sept. 28, 2005).

Further support for the proposition that ID requires supernatural creation is found in the book Pandas, to which students in Dover's ninth grade biology class are directed. Pandas indicates that there are two kinds of causes, natural and intelligent, which demonstrate that intelligent causes are beyond nature. (P-11 at 6). Professor Haught, who as noted was the only theologian to testify in this case, explained that in Western intellectual tradition, non-natural causes occupy a space reserved for ultimate religious explanations. (9:13-14 (Haught)). Robert Pennock,

Plaintiffs' expert in the philosophy of science, concurred with Professor Haught and concluded that because its basic proposition is that the features of the natural world are produced by a transcendent, immaterial, non-natural being, ID is a religious proposition regardless of whether that religious proposition is given a recognized religious label. (5:55-56 (Pennock)). It is notable that not one defense expert was able to explain how the supernatural action suggested by ID could be anything other than an inherently religious proposition. Accordingly, we find that ID's religious nature would be further evident to our objective observer because it directly involves a supernatural designer.

A "hypothetical reasonable observer," adult or child, who is "aware of the history and context of the community and forum" is also presumed to know that ID is a form of creationism. Child Evangelism, 386 F.3d at 531 (citations omitted); Allegheny, 492 U.S. at 624-25. The evidence at trial demonstrates that ID is nothing less than the progeny of creationism. What is likely the strongest evidence supporting the finding of ID's creationist nature is the history and historical pedigree of the book to which students in Dover's ninth grade biology class are referred, Pandas. Pandas is published by an organization called FTE, as noted, whose articles of incorporation and filings with the Internal Revenue Service describe it as a religious, Christian organization. (P-461; P-28; P-566; P-633;

Buell Dep. 1:13, July 8, 2005). Pandas was written by Dean Kenyon and Percival Davis, both acknowledged creationists, and Nancy Pearcey, a Young Earth Creationist, contributed to the work. (10:102-08 (Forrest)).

As Plaintiffs meticulously and effectively presented to the Court, Pandas went through many drafts, several of which were completed prior to and some after the Supreme Court's decision in Edwards, which held that the Constitution forbids teaching creationism as science. By comparing the pre and post Edwards drafts of Pandas, three astonishing points emerge: (1) the definition for creation science in early drafts is identical to the definition of ID; (2) cognates of the word creation (creationism and creationist), which appeared approximately 150 times were deliberately and systematically replaced with the phrase ID; and (3) the changes occurred shortly after the Supreme Court held that creation science is religious and cannot be taught in public school science classes in Edwards. This word substitution is telling, significant, and reveals that a purposeful change of *words* was effected without any corresponding change in *content*, which directly refutes FTE's argument that by merely disregarding the words "creation" and "creationism," FTE expressly rejected creationism in Pandas. In early pre-Edwards drafts of Pandas, the term "creation" was defined as "various forms of life that began abruptly through an intelligent agency with their distinctive features

intact – fish with fins and scales, birds with feathers, beaks, and wings, etc," the very same way in which ID is defined in the subsequent published versions. (P-560 at 210; P-1 at 2-13; P-562 at 2-14, P-652 at 2-15; P-6 at 99-100; P-11 at 99-100; P-856.2.). This definition was described by many witnesses for both parties, notably including defense experts Minnich and Fuller, as "special creation" of kinds of animals, an inherently religious and creationist concept. (28:85-86 (Fuller); Minnich Dep. at 34, May 26, 2005; Trial Tr. vol. 1, Miller Test., 141-42, Sept. 26, 2005; 9:10 (Haught); Trial Tr. vol. 33, Bonsell Test., 54-56, Oct. 31, 2005). Professor Behe's assertion that this passage was merely a *description* of appearances in the fossil record is illogical and defies the weight of the evidence that the passage is a conclusion about how life began based upon an *interpretation* of the fossil record, which is reinforced by the content of drafts of Pandas.

The weight of the evidence clearly demonstrates, as noted, that the systemic change from "creation" to "intelligent design" occurred sometime in 1987, *after* the Supreme Court's important Edwards decision. This compelling evidence strongly supports Plaintiffs' assertion that ID is creationism re-labeled. Importantly, the objective observer, whether adult or child, would conclude from the fact that Pandas posits a master intellect that the intelligent designer is God.

Further evidence in support of the conclusion that a reasonable observer,

adult or child, who is "aware of the history and context of the community and forum" is presumed to know that ID is a form of creationism concerns the fact that ID uses the same, or exceedingly similar arguments as were posited in support of creationism. One significant difference is that the words "God," "creationism," and "Genesis" have been systematically purged from ID explanations, and replaced by an unnamed "designer." Dr. Forrest testified and sponsored exhibits showing six arguments common to creationists. (10:140-48 (Forrest); P-856.5-856.10). Demonstrative charts introduced through Dr. Forrest show parallel arguments relating to the rejection of naturalism, evolution's threat to culture and society, "abrupt appearance" implying divine creation, the exploitation of the same alleged gaps in the fossil record, the alleged inability of science to explain complex biological information like DNA, as well as the theme that proponents of each version of creationism merely aim to teach a scientific alternative to evolution to show its "strengths and weaknesses," and to alert students to a supposed "controversy" in the scientific community. (10:140-48 (Forrest)). In addition, creationists made the same argument that the complexity of the bacterial flagellum supported creationism as Professors Behe and Minnich now make for ID. (P-853; P-845; 37:155-56 (Minnich)). The IDM openly welcomes adherents to creationism into its "Big Tent," urging them to postpone biblical disputes like the age of the

earth. (11:3-15 (Forrest); P-429). Moreover and as previously stated, there is hardly better evidence of ID's relationship with creationism than an explicit statement by defense expert Fuller that ID is a form of creationism. (Fuller Dep. at 67, June 21, 2005) (indicated that ID is a modern view of creationism).

Although contrary to Fuller, defense experts Professors Behe and Minnich testified that ID is not creationism, their testimony was primarily by way of bare assertion and it failed to directly rebut the creationist history of Pandas or other evidence presented by Plaintiffs showing the commonality between creationism and ID. The sole argument Defendants made to distinguish creationism from ID was their assertion that the term "creationism" applies only to arguments based on the Book of Genesis, a young earth, and a catastrophic Noaich flood; however, substantial evidence established that this is only one form of creationism, including the chart that was distributed to the Board Curriculum Committee, as will be described below. (P-149 at 2; 10:129-32 (Forrest); P-555 at 22-24).

Having thus provided the social and historical context in which the ID Policy arose of which a reasonable observer, either adult or child would be aware, we will now focus on what the objective student alone would know. We will accordingly determine whether an objective student would view the disclaimer read to the ninth grade biology class as an official endorsement of religion.

2. Whether an Objective Student Would View the Disclaimer as a Official Endorsement of Religion

The Supreme Court instructed in Edwards that it has been particularly "vigilant in monitoring compliance with the Establishment Clause in elementary and secondary schools." 482 U.S. at 583-84. The Supreme Court went on to state that:

> Families entrust public schools with the education of their children, but condition their trust on the understanding that the classroom will not purposely be used to advance religious views that may conflict with the private beliefs of the student and his or her family. Students in such institutions are impressionable and their attendance is involuntary.

Id. (citing Grand Rapids Sch. Dist. v. Ball, 473 U.S. 373, 383 (1985); Wallace, 472 U.S. at 60 n.51).

In ascertaining whether an objective Dover High School ninth grade student would view the disclaimer as an official endorsement of religion, it is important to note that a reasonable, objective student is not a specific, actual student, or even an amalgam of actual students, but is instead a hypothetical student, one to whom the reviewing court imputes detailed historical and background knowledge, but also one who interprets the challenged conduct in light of that knowledge with the level of intellectual sophistication that a child of the relevant age would bring to bear. See, e.g., Child Evangelism, 386 F.3d at 531 ("[A] reasonable observer, 'aware of

the history and context of the community and forum,' would know that [the school district] has a policy of assisting a broad range of community groups, that [the district] plays no role in composing the flyers that are sent home and does not pay for them, and that [the district's] teachers do not discuss the flyers in class." This detailed, sophisticated knowledge was imputed to elementary-school students.)(internal citations omitted); Good News, 533 U.S. at 119 (Admonished not to proscribe religious activity "on the basis of what the youngest members of the audience might perceive.").

Plaintiffs accurately submit that reviewing courts often make no distinction between an adult observer and a student observer when deciding whether a public school's conduct conveys an unconstitutional message of religious endorsement. However, when such a distinction is drawn, as is appropriate to do under the circumstances of this case, courts have recognized that because students are more impressionable than adults, they may be systematically less effective than adults at recognizing when religious conduct is unofficial and therefore permissible. See, e.g., Selman, 390 F. Supp. 2d at 1311 (textbook sticker stating that evolution was theory was particularly likely to convey message of endorsement "given the Sticker's intended audience, impressionable school students"); Joki v. Bd. of Educ., 745 F. Supp. 823, 831 (N.D.N.Y. 1990) ("To an impressionable student,

even the mere appearance of secular involvement in religious activities might indicate that the state has placed its imprimatur on a particular religious creed."). Accordingly, the objective student standard is a means to ensure that courts exercise the particular vigilance that the Supreme Court has mandated for protecting impressionable children from religious messages that appear to carry official imprimatur; it is not a tool for excluding or ignoring material evidence.

After a careful review of the record and for the reasons that follow, we find that an objective student would view the disclaimer as a strong official endorsement of religion. Application of the objective student standard pursuant to the endorsement test reveals that an objective Dover High School ninth grade student will unquestionably perceive the text of the disclaimer, "enlightened by its context and contemporary legislative history," as conferring a religious concept on "her school's seal of approval." Selman, 390 F. Supp. 2d at 1300; Santa Fe, 530 U.S. at 308; Edwards, 482 U.S. at 594 (in addition to "[t]he plain meaning of the [enactment's] words, enlightened by their context and the contemporaneous legislative history," the Supreme Court also looks for legislative purpose in "the historical context of the [enactment], and the specific sequence of events leading to [its] passage")(internal citations omitted); see also Santa Fe, 530 U.S. at 308 ("Regardless of the listener's support for, or objection to, the message, an objective

Santa Fe High School student will unquestionably perceive the inevitable pregame prayer as stamped with her school's seal of approval.").

We arrive at this conclusion by initially considering the plain language of the disclaimer, paragraph by paragraph. The first paragraph reads as follows:

> The Pennsylvania Academic Standards require students to learn about Darwin's Theory of Evolution and eventually to take a standardized test of which evolution is a part.

P-124. The evidence in this case reveals that Defendants do not mandate a similar pronouncement about *any other aspect of the biology curriculum or the curriculum for any other course*, despite the fact that state standards directly address numerous other topics covered in the biology curriculum and the students' other classes, and despite the fact that standardized tests cover such other topics as well. Notably, the unrefuted testimony of Plaintiffs' science education expert Dr. Alters, the only such expert to testify in the case sub judice explains, and the testimony of Drs. Miller and Padian confirms, the message this paragraph communicates to ninth grade biology students is that:

> [W]e have to teach this stuff[.] The other stuff we're just going to teach you, but now this one we have to say the Pennsylvania academic standards require[] students to . . . eventually take a test. We'd rather not do it, but Pennsylvania academic standards . . . require students to do this.

Trial Tr. vol. 14, Alters Test., 110-11, Oct. 12, 2005.

Stated another way, the first paragraph of the disclaimer directly addresses and disavows evolutionary theory by telling students that they have to learn about evolutionary theory because it is required by "Pennsylvania Academic Standards" and it will be tested; however, no similar disclaimer prefacing instruction is conducted regarding any other portion of the biology curriculum nor any other course's curriculum.

The second paragraph of the disclaimer reads as follows:

> Because Darwin's Theory is a theory, it continues to be tested as new evidence is discovered. The Theory is not a fact. Gaps in the Theory exist for which there is no evidence. A theory is defined as a well-tested explanation that unifies a broad range of observations.

P-124. This paragraph singles out evolution from the rest of the science curriculum and informs students that evolution, unlike anything else that they are learning, is "just a theory," which plays on the "colloquial or popular understanding of the term ['theory'] and suggest[ing] to the informed, reasonable observer that evolution is only a highly questionable 'opinion' or a 'hunch.'" Selman, 390 F. Supp. 2d at 1310; 14:110-12 (Alters); 1:92 (Miller). Immediately after students are told that "Darwin's Theory" is a theory and that it continues to be tested, they are told that "gaps" exist within evolutionary theory without any

indication that other scientific theories might suffer the same supposed weakness. As Dr. Alters explained this paragraph is both misleading and creates misconceptions in students about evolutionary theory by misrepresenting the scientific status of evolution and by telling students that they should regard it as singularly unreliable, or on shaky ground. (14:117 (Alters)). Additionally and as pointed out by Plaintiffs, it is indeed telling that even defense expert Professor Fuller agreed with this conclusion by stating that in his own expert opinion the disclaimer is misleading. (Fuller Dep. 110-11, June 21, 2005). Dr. Padian bluntly and effectively stated that in confusing students about science generally and evolution in particular, the disclaimer makes students "stupid." (Trial Tr. vol. 17, Padian Test., 48-52, Oct. 14, 2005).

In summary, the second paragraph of the disclaimer undermines students' education in evolutionary theory and sets the groundwork for presenting students with the District's favored religious alternative.

Paragraph three of the disclaimer proceeds to present this alternative and reads as follows:

> Intelligent Design is an explanation of the origin of life that differs from Darwin's view. The reference book, Of Pandas and People, is available for students who might be interested in gaining an understanding of what Intelligent Design actually involves.

P-124. Students are therefore provided information that contrasts ID with "Darwin's *view*" and are directed to consult Pandas as though it were a scientific text that provided a scientific account of, and empirical scientific evidence for, ID. The theory or "view" of evolution, which has been discredited by the District in the student's eyes, is contrasted with an alternative "explanation," as opposed to a "theory," that can be offered without qualification or cautionary note. The alternative "explanation" thus receives markedly different treatment from evolutionary "theory." In other words, the disclaimer relies upon the very same "contrived dualism" that the court in McLean recognized to be a creationist tactic that has "no scientific factual basis or legitimate educational purpose." McLean, 529 F. Supp. at 1266.[6]

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[6] The McLean court explained that:

> The approach to teaching 'creation science' and 'evolution science' . . . is identical to the two-model approach espoused by the Institute for Creation Research and is taken almost verbatim from ICR writings. It is an extension of Fundamentalists' view that one must either accept the literal interpretation of Genesis or else believe in the godless system of evolution.
>
> The two model approach of creationists is simply a *contrived dualism* which has no scientific factual basis or legitimate educational purpose. It assumes only two explanations for the origins of life and existence of man, plants and animals: it was either the work of a creator or it was not. Application of these two models, according to creationists, and the defendants, dictates that all scientific evidence which fails to support the theory of evolution is necessarily scientific evidence in support of creationism and is, therefore, creation science 'evidence[.]'

529 F. Supp. at 1266 (footnote omitted)(emphasis added).

The overwhelming evidence at trial established that ID is a religious view, a mere re-labeling of creationism, and not a scientific theory. As the Fifth Circuit Court of Appeals held in Freiler, an educator's "reading of a disclaimer that not only disavows endorsement of educational materials but also juxtaposes that disavowal with an urging to contemplate alternative religious concepts implies School Board approval of religious principles." Freiler, 185 F.3d at 348.

In the fourth and final paragraph of the disclaimer, students are informed of the following:

> With respect to any theory, students are encouraged to keep an open mind. The school leaves the discussion of the Origins of Life to individual students and their families. As a Standards-driven district, class instruction focuses upon preparing students to achieve proficiency on Standards-based assessments.

P-124.

Plaintiffs accurately submit that the disclaimer mimics the one that the Fifth Circuit struck down as unconstitutional in Freiler in two key aspects. First, while encouraging students to keep an open mind and explore alternatives to evolution, it offers no scientific alternative; instead, the only alternative offered is an inherently religious one, namely, ID. Freiler, 185 F.3d at 344-47 (disclaimer urging students to "exercise critical thinking and gather all information possible and closely examine each alternative toward forming an opinion" referenced "Biblical version

of Creation" as the only alternative theory, thus "encourag[ing] students to read and meditate upon religion in general and the "Biblical version of Creation" in particular.) Whether a student accepts the Board's invitation to explore Pandas, and reads a creationist text, or follows the Board's other suggestion and discusses "Origins of Life" with family members, that objective student can reasonably infer that the District's favored view is a religious one, and that the District is accordingly sponsoring a form of religion. Second, by directing students to their families to learn about the "Origins of Life," the paragraph performs the exact same function as did the Freiler disclaimer: It "reminds school children that they can rightly maintain beliefs taught by their parents on the subject of the origin of life," thereby stifling the critical thinking that the class's study of evolutionary theory might otherwise prompt, to protect a religious view from what the Board considers to be a threat. Id. at 345 (because disclaimer effectively told students "that evolution as taught in the classroom need not affect what they already know," it sent a message that was "contrary to an intent to encourage critical thinking, which requires that students approach new concepts with an open mind and willingness to alter and shift existing viewpoints").

A thorough review of the disclaimer's plain language therefore conveys a strong message of religious endorsement to an objective Dover ninth grade student.

The classroom presentation of the disclaimer provides further evidence that it conveys a message of religious endorsement. It is important to initially note that as a result of the teachers' refusal to read the disclaimer, school administrators were forced to make special appearances in the science classrooms to deliver it. No evidence was presented by any witness that the Dover students are presented with a disclaimer of any type in any other topic in the curriculum. An objective student observer would accordingly be observant of the fact that the message contained in the disclaimer is special and carries special weight. In addition, the objective student would understand that the administrators are reading the statement because the biology teachers refused to do so on the ground that they are legally and ethically barred from misrepresenting a religious belief as science, as will be discussed below. (Trial Tr. vol. 25, Nilsen Test., 56-57, Oct. 21, 2005; Trial Tr. vol. 35, Baksa Test., 38, Nov. 2, 2005). This would provide the students with an additional reason to conclude that the District is advocating a religious view in biology class.

Second, the administrators made the remarkable and awkward statement, as part of the disclaimer, that "there will be no other discussion of the issue and your teachers will not answer questions on the issue." (P-124). Dr. Alters explained

that a reasonable student observer would conclude that ID is a kind of "secret science that students apparently can't discuss with their science teacher" which he indicated is pedagogically "about as bad as I could possibly think of." (14:125-27 (Alters)). Unlike anything else in the curriculum, students are under the impression that the topic to which they are introduced in the disclaimer, ID, is so sensitive that the students and their teachers are completely barred from asking questions about it or discussing it.[7]

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[7] Throughout the trial and in various submissions to the Court, Defendants vigorously argue that the reading of the statement is not "teaching" ID but instead is merely "making students aware of it." In fact, one consistency among the Dover School Board members' testimony, which was marked by selective memories and outright lies under oath, as will be discussed in more detail below, is that they did not think they needed to be knowledgeable about ID because it was not being taught to the students. We disagree.

Dr. Alters, the District's own science teachers, and Plaintiffs Christy Rehm and Steven Stough, who are themselves teachers, all made it abundantly clear by their testimony that an educator reading the disclaimer is engaged in teaching, even if it is colossally bad teaching. See, e.g., Trial Tr. vol. 6, C. Rehm Test., 77, Sept. 28, 2005; Trial Tr. vol. 15, Stough Test., 139-40, Oct. 12, 2005. Dr. Alters rejected Dover's explanation that its curriculum change and the statement implementing it are not teaching. The disclaimer is a "mini-lecture" providing substantive misconceptions about the nature of science, evolution, and ID which "facilitates learning." (14:120-23, 15:57-59 (Alters)). In addition, superintendent Nilsen agrees that students "learn" from the statement, regardless of whether it gets labeled as "teaching." (26:39 (Nilsen)).

Finally, even assuming arguendo that Defendants are correct that reading the statement is not "teaching" per se, we are in agreement with Plaintiffs that Defendants' argument is a red herring because the Establishment Clause forbids not just "teaching" religion, but any governmental action that endorses or has the primary purpose or effect of advancing religion. The constitutional violation in Epperson consisted not of teaching a religious concept but of forbidding the teaching of a secular one, evolution, for religious reasons. Epperson, 393 U.S. at 103. In addition, the violation in Santa Fe was school sponsorship of prayer at an extracurricular activity, 530 U.S. at 307-09, and the violation in Selman was embellishing students' biology textbooks with a warning sticker disclaiming evolution. 390 F. Supp. 2d at 1312.

A third important issue concerning the classroom presentation of the disclaimer is the "opt out" feature. Students who do not wish to be exposed to the disclaimer and students whose parents do not care to have them exposed it, must "opt out" to avoid the unwanted religious message. Dr. Alters testified that the "opt out" feature adds "novelty," thereby enhancing the importance of the disclaimer in the students' eyes.[8] (14:123-25 (Alters)). Moreover, the stark choice that exists between submitting to state-sponsored religious instruction and leaving the public school classroom presents a clear message to students "who are nonadherents that they are outsiders, not full members of the political community." Sante Fe, 530 U.S. at 309-10 (quotation marks omitted).

Accordingly, we find that the classroom presentation of the disclaimer, including school administrators making a special appearance in the science classrooms to deliver the statement, the complete prohibition on discussion or questioning ID, and the "opt out" feature all convey a strong message of religious endorsement.

An objective student is also presumed to know that the Dover School Board

[8] In fact, the "opt out" procedure, as will be detailed herein, is itself clumsy and thus noteworthy to students and their parents, as it involves the necessity for students to have a form signed by parents and returned to the classroom before the disclaimer is read. Despite the fact that if properly executed the "opt out" form would excuse a student from hearing the disclaimer, the need to review the form and have some minimal discussion at least between parent and child hardly obviates the impact of the disclaimer, whether heard or not in the classroom.

advocated for the curriculum change and disclaimer in expressly religious terms, that the proposed curriculum change prompted massive community debate over the Board's attempts to inject religious concepts into the science curriculum, and that the Board adopted the ID Policy in furtherance of an expressly religious agenda, as will be elaborated upon below. Additionally, the objective student is presumed to have information concerning the history of religious opposition to evolution and would recognize that the Board's ID Policy is in keeping with that tradition. Consider, for example, that the Supreme Court in Santa Fe stated it presumed that "every Santa Fe High School student understands clearly" that the school district's policy "is about prayer," and not student free speech rights as the school board had alleged, and the Supreme Court premised that presumption on the principle that "the history and ubiquity" of the graduation prayer practice "provides part of the context in which a reasonable observer evaluates whether a challenged governmental practice conveys a message of endorsement of religion." Santa Fe, 530 U.S. at 315; Allegheny, 492 U.S. at 630; see also Black Horse Pike, 84 F.3d at 1486.

Importantly, the historical context that the objective student is presumed to know consists of a factor that weighed heavily in the Supreme Court's decision to strike down the balanced-treatment law in Edwards, specifically that "[o]ut of

many possible science subjects taught in the public schools, the legislature chose to affect the teaching of the one scientific theory that historically has been opposed by certain religious sects." 482 U.S. at 593. Moreover, the objective student is presumed to know that encouraging the teaching of evolution as a theory rather than as a fact is one of the latest strategies to dilute evolution instruction employed by anti-evolutionists with religious motivations. Selman, 390 F. Supp. 2d at 1308.

In summary, the disclaimer singles out the theory of evolution for special treatment, misrepresents its status in the scientific community, causes students to doubt its validity without scientific justification, presents students with a religious alternative masquerading as a scientific theory, directs them to consult a creationist text as though it were a science resource, and instructs students to forego scientific inquiry in the public school classroom and instead to seek out religious instruction elsewhere. Furthermore, as Drs. Alters and Miller testified, introducing ID necessarily invites religion into the science classroom as it sets up what will be perceived by students as a "God-friendly" science, the one that explicitly mentions an intelligent designer, and that the "other science," evolution, takes no position on religion. (14:144-45 (Alters)). Dr. Miller testified that a false duality is produced: It "tells students . . . quite explicitly, choose God on the side of intelligent design or choose atheism on the side of science." (2:54-55 (Miller)). Introducing such a

religious conflict into the classroom is "very dangerous" because it forces students to "choose between God and science," not a choice that schools should be forcing on them. Id. at 55.

Our detailed chronology of what a reasonable, objective student is presumed to know has made abundantly clear to the Court that an objective student would view the disclaimer as a strong official endorsement of religion or a religious viewpoint. We now turn to whether an objective adult observer in the Dover community would perceive Defendants' conduct similarly.

3. Whether an Objective Dover Citizen Would Perceive Defendants' Conduct to be an Endorsement of Religion

The Court must consider whether an objective adult observer in the Dover community would perceive the challenged ID Policy as an endorsement of religion because the unrefuted evidence offered at trial establishes that although the disclaimer is read to students in their ninth grade biology classes, the Board made and subsequently defended its decision to implement the curriculum change publicly, thus casting the entire community as the "listening audience" for its religious message. Santa Fe, 530 U.S. at 308. We are in agreement with Plaintiffs that when a governmental practice bearing on religion occurs within view of the entire community, the reasonable observer is an objective, informed adult within the community at large, even if the specific practice is directed at only a subset of

that community, as courts routinely look beyond the government's intended audience to the broader listening audience. Otherwise, government would be free and able to sponsor religious messages simply by declaring that those who share in the beliefs that it is espousing are the message's only intended recipients. See Allegheny, 492 U.S. at 597 ("when evaluating the effect of government conduct under the Establishment Clause, we must ascertain whether 'the challenged governmental action is sufficiently likely to be perceived by adherents of the controlling denominations as an endorsement, and by the nonadherents as a disapproval, of their individual religious choice'") (quoting Ball, 473 U.S. at 390).[9] Accordingly, not only are parents and other Dover citizens part of the listening audience for the Board's curriculum change, but they are part of its "intended audience" as well.

First, the Board brought the public into the debate over whether to include

[9] To further illustrate, we note the Third Circuit Court of Appeals' decision in Tenafly Eruv Ass'n v. Borough of Tenafly, 309 F.3d 144 (3d Cir. 2002). In Tenafly, the Third Circuit applied the endorsement test to the question of whether a town would violate the Establishment Clause if it allowed a group of Orthodox Jews to attach markers to utility poles for religious reasons. Although the markers "were attached for the benefit of other Orthodox Jews, not the general public," the Third Circuit nonetheless performed the endorsement inquiry from the standpoint of a reasonable, informed, objective observer in the community at large. Id. at 161-62, 174-78. This inquiry performed by the court is logical because although Orthodox Jews were the markers' "intended audience" in the sense that they were the ones for whose benefit the markers were placed, the markers appeared on utility polices where anyone in the community might see them and attempt to ascertain their meaning, as well as the government's relationship to them. Id. at 162.

ID in the curriculum as it proposed, advocated, and ultimately approved the ID Policy in public school board meetings. These meetings were such that members of the public not only attended them, but also had the opportunity to offer public comment on the proposal. In those Board meetings, open to the public at large, several Dover School Board members advocated for the ID Policy in expressly religious terms, with their comments reported extensively in the local newspapers, as will be discussed in detail below. Second, at least two Board members, William Buckingham and Heather Geesey, defended the proposed curriculum change in the media in expressly religious terms.

Moreover, it is notable that the Board sent a newsletter to every household in Dover in February 2005 "produced to help explain the changes in the biology curriculum" and prepared in conjunction with defense counsel, the Thomas More Law Center. (P-127). Typically, the Board sent out a newsletter in the Dover area approximately four times a year and in February 2005, the Board unanimously voted to mail a specialized newsletter to the community. (Trial Tr. vol. 15, C. Sneath Test., 98-99, 136, Oct. 12, 2005; P-82). Although formatted like a typical district newsletter, an objective adult member of the Dover community is presumed to understand this mailing as an aggressive advocacy piece denigrating the scientific theory of evolution while advocating ID. Within this newsletter, the

initial entry under the heading "Frequently Asked Questions" demeans Plaintiffs for protecting their Constitutional rights as it states, "A small minority of parents have objected to the recent curriculum change by arguing that the Board has acted to impose its own religious beliefs on students." (P-127 at 1). Religion is again mentioned in the second "Frequently Asked Question" as it poses the question "Isn't ID simply religion in disguise?" Id. The newsletter suggests that scientists engage in trickery and doublespeak about the theory of evolution by stating, "The word evolution has several meanings, and those supporting Darwin's theory of evolution use that confusion in definition to their advantage." Id. The newsletter additionally makes the claim that ID is a scientific theory on par with evolution and other scientific theories by explaining, "The theory of intelligent design (ID) is a scientific theory that differs from Darwin's view, and is endorsed by a growing number of credible scientists." Id. at 2. Evolution is subsequently denigrated and claims that have not been advanced, must less proven in the scientific community, are elaborated upon in the newsletter. "In simple terms, on a molecular level, scientists have discovered a purposeful arrangement of parts, which cannot be explained by Darwin's theory. In fact, since the 1950s, advances in molecular biology and chemistry have shown us that living cells, the fundamental units of life processes, cannot be explained by chance." Id. The newsletter suggests that

evolution has atheistic implications by indicating that "Some have said that before Darwin, 'we thought a benevolent God had created us. Biology took away our status as made in the image of God' . . . or 'Darwinism made it possible to be an intellectually fulfilled atheist.'" Id. Finally and notably, the newsletter all but admits that ID is religious by quoting Anthony Flew, described as a "world famous atheist who now believes in intelligent design," as follows: "My whole life has been guided by the principle of Plato's Socrates: Follow the evidence where it leads." Id.

The February 2005 newsletter was mailed to every household in Dover. Even those individuals who had no children, never attended a Dover Board meeting, and never concerned themselves with learning about school policies, were directly confronted and made the "listening audience" for the District's announcement of its sponsorship of a religious viewpoint. Thus, the February 2005 newsletter was an astonishing propaganda discourse which succeeded in advising the few individuals who were by that time not aware that a firestorm had erupted over ID in Dover.

In addition to being aware of the public debate, over whether to include ID in the biology curriculum, the public board meetings where such proposed curriculum change was advanced in expressly religious terms, and receiving a

newsletter providing detailed information about the ID Policy, the District assigned Dover parents a special role regarding the ID Policy. Parents of ninth grade biology students who are subject to the ID Policy are sent a letter when their children are taking biology, "asking if anyone ha[s] a problem with the [disclaimer] statement," and calling on them to decide whether to allow their children to remain in the classroom and hear the religious message or instead to direct their children to leave the room. (P-124). When parents must give permission for their children to participate in an activity, the Supreme Court has held that the parents are the relevant audience for purposes of the endorsement. See Good News, 533 U.S. at 115 (parents are relevant audience for determining whether presence of after-school Bible club at public elementary school conveyed message of religious endorsement because the parents had to give children permission to participate in club); see also Rusk v. Crestview Local Sch. Dist., 379 F.3d 418, 421 (6th Cir. 2004) (parents are audience for flyers distributed to elementary-school students because parents must give permission for children to participate in advertised activities). The converse must also be true, when parents must decide whether to withhold permission to participate in an activity or course of instruction, they remain the relevant audience for ascertaining whether government is communicating a message favoring religion.

An objective adult member of the Dover community would also be presumed to know that ID and teaching about supposed gaps and problems in evolutionary theory are creationist religious strategies that evolved from earlier forms of creationism, as we previously detailed. The objective observer is therefore aware of the social context in which the ID Policy arose and considered in light of this history, the challenged ID Policy constitutes an endorsement of a religious view for the reasons that follow.

First, the disclaimer's declaration that evolution "is a theory . . . not a fact" has the cultural meaning that the Selman court explained: "[W]hether evolution [is] referenced as a theory or a fact is . . . a loaded issue with religious undertones," reflecting "a lengthy debate between advocates of evolution and proponents of religious theories of origin[.]" It is "one of the latest strategies to dilute evolution instruction employed by anti-evolutionists with religious motivations." Selman, 390 F. Supp. 2d at 1304, 1307-08 (citing Edwards, 482 U.S. at 624) (Scalia, J., dissenting) (noting that balanced-treatment act's sponsor opposed evolution being taught as fact because it would communicate to students that "science has proved their religious beliefs false"); Freiler, 975 F. Supp. at 824 (noting school board members' concern with teaching evolution as fact because many students in district believed in biblical view of creation). A reasonable observer is presumed to know

the social meaning of the theory-not-fact deliberate word choice and would "perceive the School Board to be aligning itself with proponents of religious theories of origin," thus "communicat[ing] to those who endorse evolution that they are political outsiders, while . . . communicat[ing] to the Christian fundamentalists and creationists who pushed for a disclaimer that they are political insiders." Selman, 390 F. Supp. 2d at 1308.

Second, the Dover School Board singles out the scientific theory of evolution, specifically and repeatedly targeting it as a "theory" with "[g]aps," "problems," and inadequate empirical support. In singling out the one scientific theory that has historically been opposed by certain religious sects, the Board sent the message that it "believes there is some problem peculiar to evolution," and "[i]n light of the historical opposition to evolution by Christian fundamentalists and creationists[,] . . . the informed, reasonable observer would infer the School Board's problem with evolution to be that evolution does not acknowledge a creator." Id. at 1309.

Third, it is readily apparent to the Court that the entire community became intertwined in the controversy over the ID Policy. The Board's actions from June 2004 through October 18, 2004, the date the Board approved the curriculum change, were consistently reported in news articles in the two local newspapers, the

York Daily Record and the York Dispatch. (P-44/P-804; P-45/P-805; P-46/P-790; P-47/P-791; P-51/P-792; P-53/P-793; P-54/P-806; P-55; P-795; P-807; P-809; P-797).[10] Most of the Plaintiffs testified that they did not attend the 2004 Board meetings that preceded the curriculum change and became aware of the Board's actions only after reading about them in the local newspapers. Tammy Kitzmiller, Beth Eveland, Cindy Sneath, Steven Stough, and Joel Lieb all first learned of the Board's actions regarding the biology curriculum and textbook from the news articles.[11] (Trial Tr. vol. 3, Kitzmiller Test., 114, Sept. 27, 2005; Trial Tr. vol. 6, Eveland Test., 93-94, Sept. 28, 2005; 15:77-78 ©. Sneath); 15:113-14 (Stough); Trial Tr. vol. 17, Leib Test., 143, Oct. 14, 2005).

The news reports in the York newspapers were followed by numerous letters to the editor and editorials published in the same papers. (P-671; P-672; P-674; P-675). Although Defendants have strenuously objected to Plaintiffs' introduction of the letters to the editor and editorials from the York Daily Record and the York Dispatch addressing the curriculum controversy, we will admit such materials into evidence and consider them pursuant to the endorsement test and Lemon's effect

[10] Two exhibit numbers separated by a slash indicates that Plaintiffs introduced different formats of the same article under different exhibit numbers.

[11] In fact, Stough testified that he read the York Daily Record and the York Dispatch every day, including on the internet while he was away on vacation, to follow the Board's actions relating to the biology curriculum change. (15:112-13; 16:4 (Stough)).

prong. The letters and editorials are not offered for the truth of what is contained therein, but they are probative of the perception of the community at large. They reveal that the entire community has consistently and unwaveringly understood the controversy to concern whether a religious view should be taught as science in the Dover public school system. Moreover, and as will be explained below, the letters to the editor and editorials are relevant and probative of the community's collective social judgment that the challenged conduct advances religion. Epperson, 393 U.S. at 108 n.16.[12]

As previously noted, the Supreme Court held in Santa Fe that a public school district's conduct touching on religion should be evaluated under the endorsement test from the standpoint of how the "listening audience" would view it; and, if members of the listening audience would perceive the district's conduct as endorsing religion or a particular religious view, then the conduct violates the Establishment Clause. Santa Fe, 530 U.S. at 308. Because the endorsement inquiry is not about the perceptions of particular individuals, Plaintiffs do not argue before the Court that any particular letter or editorial, or the views expressed therein, can or should supplant this Court's consideration of the curriculum change from the

[12] In addition, the charts summarizing the letters to the editor and editorials from the York Daily Record and the York Dispatch are admitted under Fed.R.Evid. 1006 as summaries of voluminous materials.

standpoint of a reasonable observer. See Pinette, 515 U.S. at 779 (O'Connor, J., concurring in part and concurring in judgment). Instead, the Court looks to the hypothetical reasonable observer as a "personification of a community ideal of reasonable behavior, determined by the [collective] social judgment." Id. at 780.

The 225 letters to the editor and sixty-two editorials that Plaintiffs have offered constitute what Plaintiffs' counsel believe to be the entire set of such materials published in the York newspapers serving the Dover community during the period from June 1, 2004 through September 1, 2005, which includes the time period from the first Board meetings in which the proposal to change the biology curriculum was announced through the approximate starting date of the trial in this case. We have been presented with no reason to doubt this assertion. The York Daily Record published 139 letters to the editor regarding the Board's actions and eighty-six of those letters addressed the issues in religious terms. (16:18-20 (Stough)). The York Daily Record published forty-three editorials regarding the Board's actions and twenty-eight of such editorials addressed the issues in religious terms. (P-674; 16:22-24 (Stough)). The York Dispatch published eighty-six letters to the editor regarding the Board's actions, sixty of which addressed the issue in religious terms. (16:24 (Stough)). The York Dispatch published nineteen editorials regarding the Board's actions, seventeen of which addressed the issues in

religious terms. Id. at 25.

The 225 letters to the editor and sixty-two editorials from the York Daily Record and York Dispatch that Plaintiffs offered at trial and which we have admitted for consideration in our analysis of the endorsement test and Lemon's effect prong, show that hundreds of individuals in this small community felt it necessary to publish their views on the issues presented in this case for the community to see. Moreover, a review of the letters and editorials at issue reveals that in letter after letter and editorial after editorial, community members postulated that ID is an inherently religious concept, that the writers viewed the decision of whether to incorporate it into the high school biology curriculum as one which implicated a religious concept, and therefore that the curriculum change has the effect of placing the government's imprimatur on the Board's preferred religious viewpoint. (P-671-72, 674-75). These exhibits are thus probative of the fact that members of the Dover community perceived the Board as having acted to promote religion, with many citizens lined up as either for the curriculum change, on religious grounds, or against the curriculum change, on the ground that religion should not play a role in public school science class. Accordingly, the letters and editorials are relevant to, and provide evidence of, the Dover community's collective social judgment about the curriculum change because they demonstrate

that "[r]egardless of the listener's support for, or objection to," the curriculum change, the community and hence the objective observer who personifies it, cannot help but see that the ID Policy implicates and thus endorses religion.

It is additionally important to note that our determination to consider the letters and editorials is in line with the Supreme Court's decision in Epperson. In Epperson, the Supreme Court pointed to letters to the editor in a local newspaper as support for its conclusion that "fundamentalist sectarian conviction was and is" the reason that Arkansas enacted its statutory prohibition against teaching evolution in public schools. Epperson, 393 U.S. at 108. The Supreme Court quoted from three letters published in the Arkansas Gazette to show that the public "fear[ed] that teaching of evolution would be 'subversion of Christianity,' and that it would cause school children 'to disrespect the Bible.'" Id. at 108 n.16.[13]

Accordingly, taken in the aggregate, the plethora of letters to the editor and

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[13] The Supreme Court treated the letters as evidence not only of the community's view that evolutionary theory should be banned because of its perceived religious implications, but also of the public pressures driving the Arkansas legislature to adopt the measure. The Court therefore viewed them as, among other things, shedding light on the legislative purpose underlying the anti-evolution statute.

Plaintiffs accurately submit that in Modrovich, the Third Circuit Court of Appeals departed from Epperson by treating as irrelevant to the purpose inquiry letters from citizens to county officials on the grounds that (1) the letters were not authored by official decision-makers and (2) most of the letters were received after the county made its policy decision. Modrovich, 385 F.2d at 412 & n.4. Importantly, here, Plaintiffs do not offer the letters as purpose evidence, nor will they be considered as such, nor do they ask the Court to find that they prove Defendants' religious purpose for changing the curriculum. Instead, Plaintiffs offer the evidence pursuant to the endorsement test and Lemon's effect prong.

editorials from the local York newspapers constitute substantial additional evidence that the entire community became intertwined in the controversy of the ID Policy at issue and that the community collectively perceives the ID Policy as favoring a particular religious view. As a result of the foregoing analysis, we conclude that an informed, objective adult member of the Dover community aware of the social context in which the ID Policy arose would view Defendants' conduct and the challenged Policy to be a strong endorsement of a religious view.

We have now found that both an objective student and an objective adult member of the Dover community would perceive Defendants' conduct to be a strong endorsement of religion pursuant to the endorsement test. Having so concluded, we find it incumbent upon the Court to further address an additional issue raised by Plaintiffs, which is whether ID is science. To be sure, our answer to this question can likely be predicted based upon the foregoing analysis. While answering this question compels us to revisit evidence that is entirely complex, if not obtuse, after a six week trial that spanned twenty-one days and included countless hours of detailed expert witness presentations, the Court is confident that no other tribunal in the United States is in a better position than are we to traipse into this controversial area. Finally, we will offer our conclusion on whether ID is science not just because it is essential to our holding that an Establishment Clause

violation has occurred in this case, but also in the hope that it may prevent the obvious waste of judicial and other resources which would be occasioned by a subsequent trial involving the precise question which is before us.

4. Whether ID is Science

After a searching review of the record and applicable caselaw, we find that while ID arguments may be true, a proposition on which the Court takes no position, ID is not science. We find that ID fails on three different levels, any one of which is sufficient to preclude a determination that ID is science. They are: (1) ID violates the centuries-old ground rules of science by invoking and permitting supernatural causation; (2) the argument of irreducible complexity, central to ID, employs the same flawed and illogical contrived dualism that doomed creation science in the 1980's; and (3) ID's negative attacks on evolution have been refuted by the scientific community. As we will discuss in more detail below, it is additionally important to note that ID has failed to gain acceptance in the scientific community, it has not generated peer-reviewed publications, nor has it been the subject of testing and research.

Expert testimony reveals that since the scientific revolution of the 16th and 17th centuries, science has been limited to the search for natural causes to explain natural phenomena. (9:19-22 (Haught); 5:25-29 (Pennock); 1:62 (Miller)). This

revolution entailed the rejection of the appeal to authority, and by extension, revelation, in favor of empirical evidence. (5:28 (Pennock)). Since that time period, science has been a discipline in which testability, rather than any ecclesiastical authority or philosophical coherence, has been the measure of a scientific idea's worth. (9:21-22 (Haught); 1:63 (Miller)). In deliberately omitting theological or "ultimate" explanations for the existence or characteristics of the natural world, science does not consider issues of "meaning" and "purpose" in the world. (9:21 (Haught); 1:64, 87 (Miller)). While supernatural explanations may be important and have merit, they are not part of science. (3:103 (Miller); 9:19-20 (Haught)). This self-imposed convention of science, which limits inquiry to testable, natural explanations about the natural world, is referred to by philosophers as "methodological naturalism" and is sometimes known as the scientific method. (5:23, 29-30 (Pennock)). Methodological naturalism is a "ground rule" of science today which requires scientists to seek explanations in the world around us based upon what we can observe, test, replicate, and verify. (1:59-64, 2:41-43 (Miller); 5:8, 23-30 (Pennock)).

As the National Academy of Sciences (hereinafter "NAS") was recognized by experts for both parties as the "most prestigious" scientific association in this country, we will accordingly cite to its opinion where appropriate. (1:94, 160-61

(Miller); 14:72 (Alters); 37:31 (Minnich)). NAS is in agreement that science is limited to empirical, observable and ultimately testable data: "Science is a particular way of knowing about the world. In science, explanations are restricted to those that can be inferred from the confirmable data – the results obtained through observations and experiments that can be substantiated by other scientists. Anything that can be observed or measured is amenable to scientific investigation. Explanations that cannot be based upon empirical evidence are not part of science." (P-649 at 27).

This rigorous attachment to "natural" explanations is an essential attribute to science by definition and by convention. (1:63 (Miller); 5:29-31 (Pennock)). We are in agreement with Plaintiffs' lead expert Dr. Miller, that from a practical perspective, attributing unsolved problems about nature to causes and forces that lie outside the natural world is a "science stopper." (3:14-15 (Miller)). As Dr. Miller explained, once you attribute a cause to an untestable supernatural force, a proposition that cannot be disproven, there is no reason to continue seeking natural explanations as we have our answer. Id.

ID is predicated on supernatural causation, as we previously explained and as various expert testimony revealed. (17:96 (Padian); 2:35-36 (Miller); 14:62 (Alters)). ID takes a natural phenomenon and, instead of accepting or seeking a

natural explanation, argues that the explanation is supernatural. (5:107 (Pennock)). Further support for the conclusion that ID is predicated on supernatural causation is found in the ID reference book to which ninth grade biology students are directed, Pandas. Pandas states, in pertinent part, as follows:

> Darwinists object to the view of intelligent design *because it does not give a natural cause explanation* of how the various forms of life started in the first place. Intelligent design means that various forms of life began abruptly, through an intelligent agency, with their distinctive features already intact – fish with fins and scales, birds with feathers, beaks, and wings, etc.

P-11 at 99-100 (emphasis added). Stated another way, ID posits that animals did not evolve naturally through evolutionary means but were created abruptly by a non-natural, or supernatural, designer. Defendants' own expert witnesses acknowledged this point. (21:96-100 (Behe); P-718 at 696, 700 ("implausible that the designer is a natural entity"); 28:21-22 (Fuller) (". . . ID's rejection of naturalism and commitment to supernaturalism . . ."); 38:95-96 (Minnich) (ID does not exclude the possibility of a supernatural designer, including deities).

It is notable that defense experts' own mission, which mirrors that of the IDM itself, is to change the ground rules of science to allow supernatural causation of the natural world, which the Supreme Court in Edwards and the court in McLean correctly recognized as an inherently religious concept. Edwards, 482

U.S. at 591-92; McLean, 529 F. Supp. at 1267. First, defense expert Professor Fuller agreed that ID aspires to "change the ground rules" of science and lead defense expert Professor Behe admitted that his broadened definition of science, which encompasses ID, would also embrace astrology. (28:26 (Fuller); 21:37-42 (Behe)). Moreover, defense expert Professor Minnich acknowledged that for ID to be considered science, the ground rules of science have to be broadened to allow consideration of supernatural forces. (38:97 (Minnich)).

Prominent IDM leaders are in agreement with the opinions expressed by defense expert witnesses that the ground rules of science must be changed for ID to take hold and prosper. William Dembski, for instance, an IDM leader, proclaims that science is ruled by methodological naturalism and argues that this rule must be overturned if ID is to prosper. (5:32-37 (Pennock)); P-341 at 224 ("Indeed, entire fields of inquiry, including especially in the human sciences, will need to be rethought from the ground up in terms of intelligent design.").

The Discovery Institute, the think tank promoting ID whose CRSC developed the Wedge Document, acknowledges as "Governing Goals" to "defeat scientific materialism and its destructive moral, cultural and political legacies" and "replace materialistic explanations with the theistic understanding that nature and human beings are created by God." (P-140 at 4). In addition, and as previously

noted, the Wedge Document states in its "Five Year Strategic Plan Summary" that the IDM's goal is to replace science as currently practiced with "theistic and Christian science." Id. at 6. The IDM accordingly seeks nothing less than a complete scientific revolution in which ID will supplant evolutionary theory.[14]

Notably, every major scientific association that has taken a position on the issue of whether ID is science has concluded that ID is not, and cannot be considered as such. (1:98-99 (Miller); 14:75-78 (Alters); 37:25 (Minnich)). Initially, we note that NAS, the "most prestigious" scientific association in this country, views ID as follows:

> Creationism, intelligent design, and other claims of supernatural intervention in the origin of life or of species are not science because they are not testable by the methods of science. These claims subordinate observed data to statements based on authority, revelation, or

[14] Further support for this proposition is found in the Wedge Strategy, which is composed of three phases: Phase I is scientific research, writing and publicity; Phase II is publicity and opinion-making; and Phase III is cultural confrontation and renewal. (P-140 at 3). In the "Five Year Strategic Plan Summary," the Wedge Document explains that the social consequences of materialism have been "devastating" and that it is necessary to broaden the wedge with a positive scientific alternative to materialistic scientific theories, which has come to be called the theory of ID. "Design theory promises to reverse the stifling dominance of the materialist worldview, and to replace it with a science consonant with Christian and theistic convictions." Id. at 6. Phase I of the Wedge Strategy is an essential component and directly references "scientific revolutions." Phase II explains that alongside a focus on influential opinion-makers, "we also seek to build up a popular base of support among our natural constituency, namely, Christians. We will do this primarily through apologetics seminars. We intend these to encourage and equip believers with new scientific evidence that support the faith, as well as to 'popularize' our ideas in the broader culture." Id. Finally, Phase III includes pursuing possible legal assistance "in response to resistance to the integration of design theory into public school science curricula." Id. at 7.

> religious belief. Documentation offered in support of these claims is typically limited to the special publications of their advocates. These publications do not offer hypotheses subject to change in light of new data, new interpretations, or demonstration of error. This contrasts with science, where any hypothesis or theory always remains subject to the possibility of rejection or modification in the light of new knowledge.

P-192 at 25. Additionally, the American Association for the Advancement of Science (hereinafter "AAAS"), the largest organization of scientists in this country, has taken a similar position on ID, namely, that it "has not proposed a scientific means of testing its claims" and that "the lack of scientific warrant for so-called 'intelligent design theory' makes it improper to include as part of science education . . ." (P-198). Not a single expert witness over the course of the six week trial identified one major scientific association, society or organization that endorsed ID as science. What is more, defense experts concede that ID is not a theory as that term is defined by the NAS and admit that ID is at best "fringe science" which has achieved no acceptance in the scientific community. (21:37-38 (Behe); Fuller Dep. at 98-101, June 21, 2005; 28:47 (Fuller); Minnich Dep. at 89, May 26, 2005).

It is therefore readily apparent to the Court that ID fails to meet the essential ground rules that limit science to testable, natural explanations. (3:101-03 (Miller); 14:62 (Alters)). Science cannot be defined differently for Dover students than it is defined in the scientific community as an affirmative action program, as advocated

by Professor Fuller, for a view that has been unable to gain a foothold within the scientific establishment. Although ID's failure to meet the ground rules of science is sufficient for the Court to conclude that it is not science, out of an abundance of caution and in the exercise of completeness, we will analyze additional arguments advanced regarding the concepts of ID and science.

ID is at bottom premised upon a false dichotomy, namely, that to the extent evolutionary theory is discredited, ID is confirmed. (5:41 (Pennock)). This argument is not brought to this Court anew, and in fact, the same argument, termed "contrived dualism" in McLean, was employed by creationists in the 1980's to support "creation science." The court in McLean noted the "fallacious pedagogy of the two model approach" and that "[i]n efforts to establish 'evidence' in support of creation science, the defendants relied upon the same false premise as the two model approach . . . all evidence which criticized evolutionary theory was proof in support of creation science." McLean, 529 F. Supp. at 1267, 1269. We do not find this false dichotomy any more availing to justify ID today than it was to justify creation science two decades ago.

ID proponents primarily argue for design through negative arguments against evolution, as illustrated by Professor Behe's argument that "irreducibly complex" systems cannot be produced through Darwinian, or any natural,

mechanisms. (5:38-41 (Pennock); 1:39, 2:15, 2:35-37, 3:96 (Miller); 16:72-73 (Padian); 10:148 (Forrest)). However, we believe that arguments against evolution are not arguments for design. Expert testimony revealed that just because scientists cannot explain today how biological systems evolved does not mean that they cannot, and will not, be able to explain them tomorrow. (2:36-37 (Miller)). As Dr. Padian aptly noted, "absence of evidence is not evidence of absence." (17:45 (Padian)). To that end, expert testimony from Drs. Miller and Padian provided multiple examples where Pandas asserted that no natural explanations exist, and in some cases that none could exist, and yet natural explanations have been identified in the intervening years. It also bears mentioning that as Dr. Miller stated, just because scientists cannot explain every evolutionary detail does not undermine its validity as a scientific theory as no theory in science is fully understood. (3:102 (Miller)).

As referenced, the concept of irreducible complexity is ID's alleged scientific centerpiece. Irreducible complexity is a negative argument against evolution, not proof of design, a point conceded by defense expert Professor Minnich. (2:15 (Miller); 38:82 (Minnich) (irreducible complexity "is not a test of intelligent design; it's a test of evolution"). Irreducible complexity additionally fails to make a positive scientific case for ID, as will be elaborated upon below.

We initially note that irreducible complexity as defined by Professor Behe in his book Darwin's Black Box and subsequently modified in his 2001 article entitled "Reply to My Critics," appears as follows:

> By irreducibly complex I mean a single system which is composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning. An irreducibly complex system cannot be produced directly by slight, successive modifications of a precursor system, because any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional . . . Since natural selection can only choose systems that are already working, then if a biological system cannot be produced gradually it would have to arise as an integrated unit, in one fell swoop, for natural selection to have anything to act on.

P-647 at 39; P-718 at 694. Professor Behe admitted in "Reply to My Critics" that there was a defect in his view of irreducible complexity because, while it purports to be a challenge to natural selection, it does not actually address "the task facing natural selection." (P-718 at 695). Professor Behe specifically explained that "[t]he current definition puts the focus on removing a part from an already-functioning system," but "[t]he difficult task facing Darwinian evolution, however, would not be to remove parts from sophisticated pre-existing systems; it would be to bring together components to make a new system in the first place." Id. In that article, Professor Behe wrote that he hoped to "repair this defect in future work;"

however, he has failed to do so even four years after elucidating his defect. Id.; 22:61-65 (Behe).

In addition to Professor Behe's admitted failure to properly address the very phenomenon that irreducible complexity purports to place at issue, natural selection, Drs. Miller and Padian testified that Professor Behe's concept of irreducible complexity depends on ignoring ways in which evolution is known to occur. Although Professor Behe is adamant in his definition of irreducible complexity when he says a precursor "missing a part is by definition nonfunctional," what he obviously means is that it will not function in the same way the system functions when all the parts are present. For example in the case of the bacterial flagellum, removal of a part may prevent it from acting as a rotary motor. However, Professor Behe excludes, by definition, the possibility that a precursor to the bacterial flagellum functioned not as a rotary motor, but in some other way, for example as a secretory system. (19:88-95 (Behe)).

As expert testimony revealed, the qualification on what is meant by "irreducible complexity" renders it meaningless as a criticism of evolution. (3:40 (Miller)). In fact, the theory of evolution proffers exaptation as a well-recognized, well-documented explanation for how systems with multiple parts could have evolved through natural means. Exaptation means that some precursor of the

subject system had a different, selectable function before experiencing the change or addition that resulted in the subject system with its present function (16:146-48 (Padian)). For instance, Dr. Padian identified the evolution of the mammalian middle ear bones from what had been jawbones as an example of this process. (17:6-17 (Padian)). By defining irreducible complexity in the way that he has, Professor Behe attempts to exclude the phenomenon of exaptation by definitional fiat, ignoring as he does so abundant evidence which refutes his argument.

Notably, the NAS has rejected Professor Behe's claim for irreducible complexity by using the following cogent reasoning:

> [S]tructures and processes that are claimed to be 'irreducibly' complex typically are not on closer inspection. For example, it is incorrect to assume that a complex structure or biochemical process can function only if all its components are present and functioning as we see them today. Complex biochemical systems can be built up from simpler systems through natural selection. Thus, the 'history' of a protein can be traced through simpler organisms . . . The evolution of complex molecular systems can occur in several ways. Natural selection can bring together parts of a system for one function at one time and then, at a later time, recombine those parts with other systems of components to produce a system that has a different function. Genes can be duplicated, altered, and then amplified through natural selection. The complex biochemical cascade resulting in blood clotting has been explained in this fashion.

P-192 at 22.

As irreducible complexity is only a negative argument against evolution, it is refutable and accordingly testable, unlike ID, by showing that there are intermediate structures with selectable functions that could have evolved into the allegedly irreducibly complex systems. (2:15-16 (Miller)). Importantly, however, the fact that the negative argument of irreducible complexity is testable does not make testable the argument for ID. (2:15 (Miller); 5:39 (Pennock)). Professor Behe has applied the concept of irreducible complexity to only a few select systems: (1) the bacterial flagellum; (2) the blood-clotting cascade; and (3) the immune system. Contrary to Professor Behe's assertions with respect to these few biochemical systems among the myriad existing in nature, however, Dr. Miller presented evidence, based upon peer-reviewed studies, that they are not in fact irreducibly complex.

First, with regard to the bacterial flagellum, Dr. Miller pointed to peer-reviewed studies that identified a possible precursor to the bacterial flagellum, a subsystem that was fully functional, namely the Type-III Secretory System. (2:8-20 (Miller); P-854.23-854.32). Moreover, defense expert Professor Minnich admited that there is serious scientific research on the question of whether the bacterial flagellum evolved into the Type-III Secretary System, the Type-III Secretory System into the bacterial flagellum, or whether they both evolved from a

common ancestor. (38:12-16 (Minnich)). None of this research or thinking involves ID. (38:12-16 (Minnich)). In fact, Professor Minnich testified about his research as follows: "we're looking at the function of these systems and how they could have been derived one from the other. And it's a legitimate scientific inquiry." (38:16 (Minnich)).

Second, with regard to the blood-clotting cascade, Dr. Miller demonstrated that the alleged irreducible complexity of the blood-clotting cascade has been disproven by peer-reviewed studies dating back to 1969, which show that dolphins' and whales' blood clots despite missing a part of the cascade, a study that was confirmed by molecular testing in 1998. (1:122-29 (Miller); P-854.17-854.22). Additionally and more recently, scientists published studies showing that in puffer fish, blood clots despite the cascade missing not only one, but three parts. (1:128-29 (Miller)). Accordingly, scientists in peer-reviewed publications have refuted Professor Behe's predication about the alleged irreducible complexity of the blood-clotting cascade. Moreover, cross-examination revealed that Professor Behe's redefinition of the blood-clotting system was likely designed to avoid peer-reviewed scientific evidence that falsifies his argument, as it was not a scientifically warranted redefinition. (20:26-28, 22:112-25 (Behe)).

The immune system is the third system to which Professor Behe has applied

the definition of irreducible complexity. Although in Darwin's Black Box, Professor Behe wrote that not only were there no natural explanations for the immune system at the time, but that natural explanations were impossible regarding its origin. (P-647 at 139; 2:26-27 (Miller)). However, Dr. Miller presented peer-reviewed studies refuting Professor Behe's claim that the immune system was irreducibly complex. Between 1996 and 2002, various studies confirmed each element of the evolutionary hypothesis explaining the origin of the immune system. (2:31 (Miller)). In fact, on cross-examination, Professor Behe was questioned concerning his 1996 claim that science would never find an evolutionary explanation for the immune system. He was presented with fifty-eight peer-reviewed publications, nine books, and several immunology textbook chapters about the evolution of the immune system; however, he simply insisted that this was still not sufficient evidence of evolution, and that it was not "good enough." (23:19 (Behe)).

We find that such evidence demonstrates that the ID argument is dependent upon setting a scientifically unreasonable burden of proof for the theory of evolution. As a further example, the test for ID proposed by both Professors Behe and Minnich is to grow the bacterial flagellum in the laboratory; however, no-one inside or outside of the IDM, including those who propose the test, has conducted

it. (P-718; 18:125-27 (Behe); 22:102-06 (Behe)). Professor Behe conceded that the proposed test could not approximate real world conditions and even if it could, Professor Minnich admitted that it would merely be a test of evolution, not design. (22:107-10 (Behe); 2:15 (Miller); 38:82 (Minnich)).

We therefore find that Professor Behe's claim for irreducible complexity has been refuted in peer-reviewed research papers and has been rejected by the scientific community at large. (17:45-46 (Padian); 3:99 (Miller)). Additionally, even if irreducible complexity had not been rejected, it still does not support ID as it is merely a test for evolution, not design. (2:15, 2:35-40 (Miller); 28:63-66 (Fuller)).

We will now consider the purportedly "positive argument" for design encompassed in the phrase used numerous times by Professors Behe and Minnich throughout their expert testimony, which is the "purposeful arrangement of parts." Professor Behe summarized the argument as follows: We infer design when we see parts that appear to be arranged for a purpose. The strength of the inference is quantitative; the more parts that are arranged, the more intricately they interact, the stronger is our confidence in design. The appearance of design in aspects of biology is overwhelming. Since nothing other than an intelligent cause has been demonstrated to be able to yield such a strong appearance of design, Darwinian

claims notwithstanding, the conclusion that the design seen in life is real design is rationally justified. (18:90-91, 18:109-10 (Behe); 37:50 (Minnich)). As previously indicated, this argument is merely a restatement of the Reverend William Paley's argument applied at the cell level. Minnich, Behe, and Paley reach the same conclusion, that complex organisms must have been designed using the same reasoning, except that Professors Behe and Minnich refuse to identify the designer, whereas Paley inferred from the presence of design that it was God. (1:6-7 (Miller); 38:44, 57 (Minnich)). Expert testimony revealed that this inductive argument is not scientific and as admitted by Professor Behe, can never be ruled out. (2:40 (Miller); 22:101 (Behe); 3:99 (Miller)).

Indeed, the assertion that design of biological systems can be inferred from the "purposeful arrangement of parts" is based upon an analogy to human design. Because we are able to recognize design of artifacts and objects, according to Professor Behe, that same reasoning can be employed to determine biological design. (18:116-17, 23:50 (Behe)). Professor Behe testified that the strength of the analogy depends upon the degree of similarity entailed in the two propositions; however, if this is the test, ID completely fails.

Unlike biological systems, human artifacts do not live and reproduce over time. They are non-replicable, they do not undergo genetic recombination, and

they are not driven by natural selection. (1:131-33 (Miller); 23:57-59 (Behe)). For human artifacts, we know the designer's identity, human, and the mechanism of design, as we have experience based upon empirical evidence that humans can make such things, as well as many other attributes including the designer's abilities, needs, and desires. (D-251 at 176; 1:131-33 (Miller); 23:63 (Behe); 5:55-58 (Pennock)). With ID, proponents assert that they refuse to propose hypotheses on the designer's identity, do not propose a mechanism, and the designer, he/she/it/they, has never been seen. In that vein, defense expert Professor Minnich agreed that in the case of human artifacts and objects, we know the identity and capacities of the human designer, but we do not know any of those attributes for the designer of biological life. (38:44-47 (Minnich)). In addition, Professor Behe agreed that for the design of human artifacts, we know the designer and its attributes and we have a baseline for human design that does not exist for design of biological systems. (23:61-73 (Behe)). Professor Behe's only response to these seemingly insurmountable points of disanalogy was that the inference still works in science fiction movies. (23:73 (Behe)).

It is readily apparent to the Court that the only attribute of design that biological systems appear to share with human artifacts is their complex appearance, i.e. if it looks complex or designed, it must have been designed.

(23:73 (Behe)). This inference to design based upon the appearance of a "purposeful arrangement of parts" is a completely subjective proposition, determined in the eye of each beholder and his/her viewpoint concerning the complexity of a system. Although both Professors Behe and Minnich assert that there is a quantitative aspect to the inference, on cross-examination they admitted that there is no quantitative criteria for determining the degree of complexity or number of parts that bespeak design, rather than a natural process. (23:50 (Behe); 38:59 (Minnich)). As Plaintiffs aptly submit to the Court, throughout the entire trial only one piece of evidence generated by Defendants addressed the strength of the ID inference: the argument is less plausible to those for whom God's existence is in question, and is much less plausible for those who deny God's existence. (P-718 at 705).

Accordingly, the purported positive argument for ID does not satisfy the ground rules of science which require testable hypotheses based upon natural explanations. (3:101-03 (Miller)). ID is reliant upon forces acting outside of the natural world, forces that we cannot see, replicate, control or test, which have produced changes in this world. While we take no position on whether such forces exist, they are simply not testable by scientific means and therefore cannot qualify as part of the scientific process or as a scientific theory. (3:101-02 (Miller)).

It is appropriate at this juncture to address ID's claims against evolution. ID proponents support their assertion that evolutionary theory cannot account for life's complexity by pointing to real gaps in scientific knowledge, which indisputably exist in all scientific theories, but also by misrepresenting well-established scientific propositions. (1:112, 1:122, 1:136-37 (Miller); 16:74-79, 17:45-46 (Padian)).

Before discussing Defendants' claims about evolution, we initially note that an overwhelming number of scientists, as reflected by every scientific association that has spoken on the matter, have rejected the ID proponents' challenge to evolution. Moreover, Plaintiffs' expert in biology, Dr. Miller, a widely-recognized biology professor at Brown University who has written university-level and high-school biology textbooks used prominently throughout the nation, provided unrebutted testimony that evolution, including common descent and natural selection, is "overwhelmingly accepted" by the scientific community and that every major scientific association agrees. (1:94-100 (Miller)). As the court in Selman explained, "evolution is more than a *theory* of origin in the context of science. To the contrary, evolution is the dominant *scientific* theory of origin accepted by the majority of scientists." Selman, 390 F. Supp. 2d at 1309 (emphasis in original). Despite the scientific community's overwhelming support for

evolution, Defendants and ID proponents insist that evolution is unsupported by empirical evidence. Plaintiffs' science experts, Drs. Miller and Padian, clearly explained how ID proponents generally and Pandas specifically, distort and misrepresent scientific knowledge in making their anti-evolution argument.

In analyzing such distortion, we turn again to Pandas, the book to which students are expressly referred in the disclaimer. Defendants hold out Pandas as representative of ID and Plaintiffs' experts agree in that regard. (16:83 (Padian); 1:107-08 (Miller)). A series of arguments against evolutionary theory found in Pandas involve paleontology, which studies the life of the past and the fossil record. Plaintiffs' expert Professor Padian was the only testifying expert witness with any expertise in paleontology.[15] His testimony therefore remains unrebutted. Dr. Padian's demonstrative slides, prepared on the basis of peer-reviewing scientific literature, illustrate how Pandas systematically distorts and misrepresents established, important evolutionary principles.

We will provide several representative examples of this distortion. First, Pandas misrepresents the "dominant form of understanding relationships" between

[15] Moreover, the Court has been presented with no evidence that either Defendants' testifying experts or any other ID proponents, including Pandas' authors, have such paleontology expertise as we have been presented with no evidence that they have published peer-reviewed literature or presented such information at scientific conferences on paleontology or the fossil record. (17:15-16 (Padian)).

organisms, namely, the tree of life, represented by classification determined via the method of cladistics. (16:87-97 (Padian); P-855.6-855.19). Second, Pandas misrepresents "homology," the "central concept of comparative biology," that allowed scientists to evaluate comparable parts among organisms for classification purposes for hundreds of years. (17:27-40 (Padian); P-855.83-855.102). Third, Pandas fails to address the well-established biological concept of exaptation, which involves a structure changing function, such as fish fins evolving fingers and bones to become legs for weight-bearing land animals. (16:146-48 (Padian)). Dr. Padian testified that ID proponents fail to address exaptation because they deny that organisms change function, which is a view necessary to support abrupt-appearance. Id. Finally, Dr. Padian's unrebutted testimony demonstrates that Pandas distorts and misrepresents evidence in the fossil record about pre-Cambrian-era fossils, the evolution of fish to amphibians, the evolution of small carnivorous dinosaurs into birds, the evolution of the mammalian middle ear, and the evolution of whales from land animals. (16:107-17, 16:117-31, 16:131-45, 17:6-9, 17:17-27 (Padian); P-855.25-855.33, P-855.34-855.45, P-855.46-855.55, P-855.56-866.63, P-855.64-855.82).

In addition to Dr. Padian, Dr. Miller also testified that Pandas presents discredited science. Dr. Miller testified that Pandas' treatment of biochemical

similarities between organisms is "inaccurate and downright false" and explained how Pandas misrepresents basic molecular biology concepts to advance design theory through a series of demonstrative slides. (1:112 (Miller)). Consider, for example, that he testified as to how Pandas misinforms readers on the standard evolutionary relationships between different types of animals, a distortion which Professor Behe, a "critical reviewer" of Pandas who wrote a section within the book, affirmed. (1:113-17 (Miller); P-854.9-854.16; 23:35-36 (Behe)).[16] In addition, Dr. Miller refuted Pandas' claim that evolution cannot account for new genetic information and pointed to more than three dozen peer-reviewed scientific publications showing the origin of new genetic information by evolutionary processes. (1:133-36 (Miller); P-245). In summary, Dr. Miller testified that Pandas misrepresents molecular biology and genetic principles, as well as the current state of scientific knowledge in those areas in order to teach readers that common descent and natural selection are not scientifically sound. (1:139-42 (Miller)).

Accordingly, the one textbook to which the Dover ID Policy directs students contains outdated concepts and badly flawed science, as recognized by even the

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[16] Additionally, testimony provided by Professor Behe revealed an increasing gap between his portrayal of ID theory and how it is presented in Pandas. Although he is a "critical reviewer" of the work, he disagrees with language provided in the text, including but not limited to the text's very definition of ID. (P-11 at 99-100).

defense experts in this case.

A final indicator of how ID has failed to demonstrate scientific warrant is the complete absence of peer-reviewed publications supporting the theory. Expert testimony revealed that the peer review process is "exquisitely important" in the scientific process. It is a way for scientists to write up their empirical research and to share the work with fellow experts in the field, opening up the hypotheses to study, testing, and criticism. (1:66-69 (Miller)). In fact, defense expert Professor Behe recognizes the importance of the peer review process and has written that science must "publish or perish." (22:19-25 (Behe)). Peer review helps to ensure that research papers are scientifically accurately, meet the standards of the scientific method, and are relevant to other scientists in the field. (1:39-40 (Miller)). Moreover, peer review involves scientists submitting a manuscript to a scientific journal in the field, journal editors soliciting critical reviews from other experts in the field and deciding whether the scientist has followed proper research procedures, employed up-to-date methods, considered and cited relevant literature and generally, whether the researcher has employed sound science.

The evidence presented in this case demonstrates that ID is not supported by any peer-reviewed research, data or publications. Both Drs. Padian and Forrest testified that recent literature reviews of scientific and medical-electronic databases

disclosed no studies supporting a biological concept of ID. (17:42-43 (Padian); 11:32-33 (Forrest)). On cross-examination, Professor Behe admitted that: "There are no peer reviewed articles by anyone advocating for intelligent design supported by pertinent experiments or calculations which provide detailed rigorous accounts of how intelligent design of any biological system occurred." (22:22-23 (Behe)). Additionally, Professor Behe conceded that there are no peer-reviewed papers supporting his claims that complex molecular systems, like the bacterial flagellum, the blood-clotting cascade, and the immune system, were intelligently designed. (21:61-62 (complex molecular systems), 23:4-5 (immune system), and 22:124-25 (blood-clotting cascade) (Behe)). In that regard, there are no peer-reviewed articles supporting Professor Behe's argument that certain complex molecular structures are "irreducibly complex."[17] (21:62, 22:124-25 (Behe)). In addition to failing to produce papers in peer-reviewed journals, ID also features no scientific research or testing. (28:114-15 (Fuller); 18:22-23, 105-06 (Behe)).

After this searching and careful review of ID as espoused by its proponents,

[17] The one article referenced by both Professors Behe and Minnich as supporting ID is an article written by Behe and Snoke entitled "Simulating evolution by gene duplication of protein features that require multiple amino acid residues." (P-721). A review of the article indicates that it does not mention either irreducible complexity or ID. In fact, Professor Behe admitted that the study which forms the basis for the article did not rule out many known evolutionary mechanisms and that the research actually might support evolutionary pathways if a biologically realistic population size were used. (22:41-45 (Behe); P-756).

as elaborated upon in submissions to the Court, and as scrutinized over a six week trial, we find that ID is not science and cannot be adjudged a valid, accepted scientific theory as it has failed to publish in peer-reviewed journals, engage in research and testing, and gain acceptance in the scientific community. ID, as noted, is grounded in theology, not science. Accepting for the sake of argument its proponents', as well as Defendants' argument that to introduce ID to students will encourage critical thinking, it still has utterly no place in a science curriculum. Moreover, ID's backers have sought to avoid the scientific scrutiny which we have now determined that it cannot withstand by advocating that the *controversy*, but not ID itself, should be taught in science class. This tactic is at best disingenuous, and at worst a canard. The goal of the IDM is not to encourage critical thought, but to foment a revolution which would supplant evolutionary theory with ID.

To conclude and reiterate, we express no opinion on the ultimate veracity of ID as a supernatural explanation. However, we commend to the attention of those who are inclined to superficially consider ID to be a true "scientific" alternative to evolution without a true understanding of the concept the foregoing detailed analysis. It is our view that a reasonable, objective observer would, after reviewing both the voluminous record in this case, and our narrative, reach the inescapable conclusion that ID is an interesting theological argument, but that it is not science.

F. Application of the Lemon Test to the ID Policy

Although we have found that Defendants' conduct conveys a strong message of endorsement of the Board members' particular religious view, pursuant to the endorsement test, the better practice in this Circuit is for this Court to also evaluate the challenged conduct separately under the Lemon test.[18] See Child Evangelism, 386 F.3d at 530-35; Modrovich, 385 F.3d at 406; Freethought, 334 F.3d at 261.

As articulated by the Supreme Court, under the Lemon test, a government-sponsored message violates the Establishment Clause of the First Amendment if: (1) it does not have a secular purpose; (2) its principal or primary effect advances or inhibits religion; or (3) it creates an excessive entanglement of the government with religion. Lemon, 403 U.S. at 612-13. As the Lemon test is disjunctive, either an improper purpose or an improper effect renders the ID Policy invalid under the Establishment Clause.[19]

We will therefore consider whether (1) Defendants' primary purpose was to advance religion or (2) the ID Policy has the primary effect of promoting religion.

1. Purpose Inquiry

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[18] As previously noted, both parties concede that the Lemon test is applicable to the case sub judice.

[19] Plaintiffs are not claiming excessive entanglement. Accordingly, Plaintiffs argue that the ID Policy is violative of the first two prongs of the Lemon test, the purpose and effect prongs.

Initially, we note that the central inquiry is whether the District has shown favoritism toward religion generally or any set of religious beliefs in particular:

> The touchstone for our analysis is the principle that the 'First Amendment mandates governmental neutrality between religion and religion, and between religion and nonreligion.' When the government acts with the ostensible and predominant purpose of advancing religion, it violates the central Establishment Clause value of official religious neutrality, there being no neutrality when the government's ostensible object is to take sides.

McCreary, 125 S. Ct. at 2733 (quoting Epperson, 393 U.S. at 104). As the Supreme Court instructed in Edwards, Lemon's purpose prong "asks whether government's actual purpose is to endorse or disapprove of religion. A governmental intention to promote religion is clear when the State enacts a law to serve a religious purpose." Edwards, 482 U.S. at 583 (quoting Lynch, 465 U.S. at 690) (O'Connor, J., concurring).

The purpose inquiry involves consideration of the ID Policy's language, "enlightened by its context and contemporaneous legislative history[,]" including, in this case, the broader context of historical and ongoing religiously driven attempts to advance creationism while denigrating evolution.[20] Selman, 390 F.

[20] We disagree with Defendants' assertions that the Court must first look for the Board's purpose in the plain text of the challenged Policy and may consider other indicia of purpose only if the Policy is ambiguous as to purpose. Similarly, we do not find that individual Board members' statements are irrelevant as a matter of law or that they cannot be considered as part of

Supp. 2d at 1300; Edwards, 482 U.S. at 590-92, 594-95 (in addition to "[t]he plain meaning of the [enactment's] words, enlightened by their context and the contemporaneous legislative history," Supreme Court also looks for legislative purposes in "the historical context of the [enactment], and the specific sequence of events leading to [its] passage"); see also Epperson, 393 U.S. at 98-101; McLean, 529 F. Supp. at 1263 (looking to history of Christian Fundamentalism nationally and to Arkansas' "long history of official opposition to evolution which is motivated by adherence to Fundamentalist beliefs," and holding that, "[i]n determining the legislative purpose of a statute, courts may consider evidence of the historical context of the Act, the specific sequence of events leading up to passage of Act, departures from normal procedural sequences, substantive

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the legislative history because they are not statements by the full Board in its collective, corporate capacity.

First, as Plaintiffs submit, at the most superficial level, Defendants' "look at the text alone" approach is on its face inapposite because ID is not defined in the Policy. Accordingly, even if this Court was limited to the disclaimer's language, which as stated we find that we are not, statutory interpretation canons would require consideration of the Policy's legislative history and historical context to ascertain what is meant by the term ID. Second, with regard to Defendants' contention that we should exclude individual Board members' statements from the legislative history on the ground that they are not full pronouncements by the Board, the Supreme Court has consistently held not only that legislative history can and must be considered in ascertaining legislative purpose under Lemon, but also that statements by a measure's sponsors and chief proponents are strong indicia of such purpose. McCreary, 125 S. Ct. at 2734 (although courts do not engage in "psychoanalysis of a drafter's heart of hearts," they routinely and properly look to individual legislators' public statements to determine legislative purpose); Edwards, 482 U.S. at 586-88 (reliance upon a statute's text and the detailed public comments of its sponsor when determining the purpose of a state law requiring creationism to be taught alongside evolution).

departures from the normal, and contemporaneous statements of the legislative sponsor.") (citations omitted).

The disclaimer's plain language, the legislative history, and the historical context in which the ID Policy arose, all inevitably lead to the conclusion that Defendants consciously chose to change Dover's biology curriculum to advance religion. We have been presented with a wealth of evidence which reveals that the District's purpose was to advance creationism, an inherently religious view, both by introducing it directly under the label ID and by disparaging the scientific theory of evolution, so that creationism would gain credence by default as the only apparent alternative to evolution, for the reasons that follow.

We will begin the Lemon purpose inquiry by providing a detailed chronology of the events that transpired in Dover leading up to the enactment of the ID Policy at issue.

We will initially supply background information on the composition of the Board, which consists of nine seats. The nine members of the Board in 2004 were Alan Bonsell, William Buckingham, Sheila Harkins, Jane Cleaver, Heather Geesey, Angie Yingling, Noel Wenrich, Jeff Brown, and Casey Brown. Wenrich and Cleaver resigned on October 4, 2004, Casey and Jeff Brown resigned on October 18, 2004, and Yingling resigned verbally in November 2004 and in

writing February 2005. (Trial Tr. vol. 34, Harkins Test., 113, Nov. 2, 2005; Cleaver Dep. at 15, June 9, 2005). During 2004, Bonsell was President of the Board and as President, he appointed Buckingham to be Chair of the Board's Curriculum Committee. (32:86-87 (Bonsell); 34:39 (Harkins)). As Board President, Bonsell also served as an ex officio member of the Curriculum Committee. (32:116 (Bonsell)).

a. Beginning in January 2002, Bonsell Made Repeated Expressions of Interest to Inject Religion into the Dover Schools

The Board held a retreat on January 9, 2002, several weeks after Bonsell joined the Board. Superintendent Nilsen's contemporaneous notes reveal that Bonsell identified "creationism" as his number one issue and "school prayer" as his number two issue. (P-21). Although Bonsell claims he cannot recall raising such subjects but does not dispute that he did, in fact, raise them, the overwhelming evidence indicates that he raised the issues of creationism and school prayer during the January 2002 Board retreat.[21]

The Board held another retreat the following year, on March 26, 2003, in which Bonsell again raised the issue of "creationism" as an issue of interest as

[21] Consider, to illustrate, that Casey Brown testified she recalled that Bonsell "expressed a desire to look into bringing prayer and faith back into the schools," that Bonsell mentioned the Bible and creationism, and felt "there should be a fair and balanced presentation within the curriculum." (Trial Tr. vol. 7, C. Brown Test., 17-18, Sept. 29, 2005).

reflected in Dr. Nilsen's contemporaneous notes. (35:50-53 (Baksa); P-25). For the second, consecutive time, Bonsell does not dispute that he raised the issue but his testimony indicates that he cannot recall doing so, despite the fact that Jeff Brown, Barrie Callahan, Bertha Spahr, and Assistant Superintendent Baksa testified otherwise. (32:75 (Bonsell); Trial Tr. vol. 8, J. Brown Test., 50-51, Sept. 29, 2005) (Recalled Bonsell say at the March 26, 2003 retreat that he felt creationism "belonged in biology class alongside evolution."); 3:126-27 (B. Callahan) (Her testimony and notes took during the March 26, 2003 retreat reveal that Bonsell said he wanted creationism taught 50/50 with evolution in biology class.).

In fact, Trudy Peterman, then principal of Dover High School, sent a memo to Assistant Superintendent Baksa and Science Department Chair Bertha Spahr with a copy sent to Dr. Nilsen on April 1, 2003. This memo reports that Peterman learned from Spahr that Baksa said on March 31, 2003, that an unidentified Board member "wanted fifty percent of the topic of evolution to involve the teaching of Creationism." (P-26). Although defense witnesses testified that Peterman was known to exaggerate situations, the weight of the evidence reveals that the essential content of the memo was indeed accurate.

In that regard, Barrie Callahan's testimony and handwritten notes from the

March 26, 2003 retreat find corroboration in Superintendent Nilsen's contemporaneous note that Bonsell raised the issue of "creationism," as do they in the Peterman memo. Additionally, Spahr confirmed that she had a conversation with Baksa, as reported in the Peterman memo, and that Baksa told her Bonsell wanted to have creationism share equal time with evolution in the curriculum. (13:72-73 (Spahr)). Third, Baksa confirmed that he had a conversation with Spahr, as reported in the Peterman memo, in which he told her that Bonsell was looking "for a 50/50 split with Darwin and some alternative." (35:53-56 (Baksa)).

Although Baksa claims he does not recall Bonsell identifying "creationism" as the subject with which he wanted to share equal time with evolution, nor that Bonsell mentioned "creationism" at any time up until April 1, 2003, we do not find his testimony on this point to be credible. We accordingly find that Bonsell is clearly the unnamed Board member referred to in Peterman's memo who wanted fifty percent of the topic of evolution to involve the teaching of creationism.

Apart from two consecutive Board retreats, Bonsell raised the issue of creationism on numerous other occasions as well. When he ran for the Board in 2001, Bonsell told Jeff Brown he did not believe in evolution, that he wanted creationism taught side-by-side with evolution in biology class, and that taking prayer and Bible reading out of school was a mistake which he wanted reinstated in

the Dover public schools. (8:48-49 (J. Brown)). Subsequently, Bonsell told Jeff Brown he wanted to be on the Board Curriculum Committee because he had concerns about teaching evolution and he wanted to see some changes in that area. (8:55 (J. Brown)). Additionally, Nilsen complained to Jeff Brown that each Board President had a new set of priorities and Bonsell's priority was that of creationism. (8:53 (J. Brown)). It is notable, and in fact incredible that Bonsell disclaimed any interest in creationism during his testimony, despite the admission by his counsel in Defendants' opening statement that Bonsell had such an interest. (1:19). Simply put, Bonsell repeatedly failed to testify in a truthful manner about this and other subjects. Finally, Bonsell not only wanted prayer in schools and creationism taught in science class, he also wanted to inject religion into the social studies curriculum, as evidenced by his statement to Baksa that he wanted students to learn more about the Founding Fathers and providing Baksa with a book entitled Myth of Separation by David Barton.[22] (36:14-15, 17 (Baksa), P-179).

b. Fall 2003 – Bonsell Confronted Teachers About Evolution

Shortly after Baksa took a position with the DASD in the fall of 2002, he

[22] Moreover, in an email to one of the social studies teachers on October 19, 2004, the day after the Board passed the resolution at issue, Baksa said: "all kidding aside, be careful what you ask for. I've been given a copy of the Myth of Separation by David Barton to review from Board members. Social Studies curriculum is next year. Feel free to borrow my copy to get an idea where the board is coming from." (36:14 (Baksa); P-91).

and Bonsell, then Chair of the Board Curriculum Committee, had discussions in which Bonsell expressed concern about the teaching of evolution, the presentation of Darwin in a biology textbook used at Dover, and felt that Darwin was presented as a fact, not a theory. (26:62-64 (Baksa); 35:55 (Baksa)). Prior to the fall of 2003, Baksa discussed Bonsell's evolutionary concerns with the teachers, including Bonsell's problem with the teaching of the origin of life, by which Bonsell meant how species change into other species, aspects of the theory of evolution also known as macroevolution and speciation. (35:66-68 (Baksa)).

Baksa then arranged for a meeting between Bonsell and science teachers in the fall of 2003 in which Jennifer Miller, the senior biology teacher, acted as spokesperson for the teachers. (Trial Tr. vol. 12, J. Miller, 107-09, Oct. 6, 2005; 35:68 (Baksa)). Miller testified that Bonsell was specifically concerned that the teachers conveyed information to students in opposition to what parents presented at home leaving students with the impression that "somebody is lying." (12:111 (J. Miller)). Miller explained that evolution is taught as change over time with emphasis upon origin of species, not origin of life. Bonsell left the meeting with the understanding that the "origins of life" is not taught, which pleased him because the concept of common ancestry offends his personal religious belief that God created man and other species in the forms they now exist and that the earth is

only thousands of years old. (33:54-58, 115 (Bonsell)).

Prior to the fall of 2003, no Dover administrator or Board member had ever met with the biology teachers and questioned them as to how they taught evolution, or any other aspect of biology. (Trial Tr. vol. 36, Linker Test., 75, Nov. 3, 2005). The result of the unprecedented fall 2003 meeting was that it had an impact upon how biology teachers subsequently taught evolution in Dover. First, before the meeting with Bonsell, biology teacher Robert Linker had a practice of explaining that creationism was based on "Bibles, religion, [and] Biblical writings," noting that it was illegal to discuss creation in public school. (36:83 (Linker)). After the meeting, however, Linker changed his prior practice by ceasing any mention of creationism at the beginning of the evolution section, as did he stop using helpful Discovery Channel evolution videos as teaching aides. (36:82-85 (Linker)). Linker testified that he changed his practices in the classroom because the unusual meeting with Bonsell alerted him to a controversy surrounding how he taught evolution. (36:84-85 (Linker)). Linker additionally testified that Jen Miller, a senior biology teacher, changed her practice of having the students create an evolution time-line in the hallway, which addressed how various species developed over millions of years. (36:86-87 (Linker)).

Therefore, although Defendants have asserted that the ID Policy has the

secular purposes of promoting critical thinking and improving science education, the opposite of such purposes occurred in fact as biology teachers had already began to omit teaching material regarding the theory of evolution in the months preceding the adoption of the ID Policy.

c. Early 2004 – Buckingham's Contacts with the Discovery Institute

At some point before June 2004, Seth Cooper, an attorney with the Discovery Institute contacted Buckingham and two subsequent calls occurred between the Discovery Institute and Buckingham. Although Buckingham testified that he only sought legal advice which was provided in the phone calls, for which Defendants asserted the attorney-client privilege, Buckingham and Cooper discussed the legality of teaching ID and gaps in Darwin's theory. (29:133-143 (Buckingham); 30:9 (Buckingham)). The Discovery Institute forwarded Buckingham a DVD, videotape, and book which he provided to Nilsen to give the science teachers. (29:130-131 (Buckingham); 25:100-01 (Nilsen); 26:114-15 (Baksa)). Late in the 2003-04 school year, Baksa arranged for the science teachers to watch a video from the Discovery Institute entitled "Icons of Evolution" and at a subsequent point, two lawyers from the Discovery Institute made a legal presentation to the Board in executive session. (Trial Tr. vol. 4, B. Rehm Test., 48-49, Sept. 27, 2005; 33:111-12 (Bonsell)).

d. June 2003 to June 2004 – Board Delayed Purchasing the Biology Textbook

In June 2003, the Board approved funds for new science textbooks, including a biology textbook, the 2002 edition of Biology written by Plaintiffs' lead expert Kenneth Miller; however, the Board did not approve the purchase of such biology textbook despite its recommendation by the faculty and administration. (3:130-31 (B. Callahan); 29:33 (Buckingham)). In fact, Buckingham testified that as of June 2004, the Board was delaying approval of Biology because of the book's treatment of evolution and the fact that it did not cover any alternatives to the theory of evolution. (29:33-34 (Buckingham)).

e. June 2004 Board Meetings – Buckingham and Other Board Members Spoke in Favor of Teaching Creationism

Plaintiffs introduced evidence that at public school board meetings held on June 7, 2004 and June 14, 2004, members of the Board spoke openly in favor of teaching creationism and disparaged the theory of evolution on religious grounds. On these important points, Plaintiffs introduced the testimony of Plaintiffs Fred and Barrie Callahan, Bryan and Christy Rehm, Beth Eveland, former school Board members Casey and Jeff Brown and William Buckingham, teachers Bertha Spahr and Jennifer Miller, and newspaper reporters Heidi Bernhard-Bubb and Joseph Maldonado. We are in agreement with Plaintiffs that with the exception of

Buckingham, the testimony of these witnesses was both credible and convincing, as will be discussed below.

We will now provide our findings regarding the June 7, 2004 Board meeting. First, the approval of several science textbooks appeared on the agenda for the meeting, but not approval for the biology textbook. (P-42 at 8-9). After Barrie Callahan asked whether the Board would approve the purchase of the 2002 edition of the textbook entitled Biology, Buckingham told Callahan that the book was "laced with Darwinism" and spoke in favor of purchasing a textbook that included a balance of creationism and evolution. (P-46/P-790; 35:76-78 (Baksa); 24:45-46 (Nilsen); 3:135-36 (B. Callahan); 4:51-52 (B. Rehm); 6:62-63 ©. Rehm); 7:25-26 ©. Brown)). With surprising candor considering his otherwise largely inconsistent and non-credible testimony, Buckingham did admit that he made this statement. Second, Buckingham said that the Board Curriculum Committee would look for a book that presented a balance between creationism and evolution. (P-45/P-805; Trial Tr. vol. 30, Bernhard-Bubb Test., 96, Oct. 27, 2005; P-46/P-790; Trial Tr. vol. 31, Maldonado Test., 59-60, Oct. 28, 2005). Third, Bonsell said that there were only two theories that could possibly be taught, creationism and evolution, and as long as both were taught as theories there would be no problems for the District. (P-46/P-790; 6:65 ©. Rehm)). Fourth, Buckingham spoke in favor

of having a biology book that included creationism. (P-47/P-791; 8:60-61 (J. Brown); 7:33 ©. Brown); 3:137-38 (B. Callahan); 30:89-90, 105-06, 110-11 (Bernhard-Bubb); 31:60, 66 (Maldonado)). Fifth, both Wenrich and Bonsell spoke in favor of having a biology book that included creationism. (P-47/P-791; 8:60 (J. Brown); 7:33 ©. Brown); 30:89-90, 105-06, 110-11 (Bernhard-Bubb); 31:66 (Maldonado); 3:137-38 (B. Callahan)). Sixth, Superintendent Nilsen said that the District was looking for a textbook that presented "all options and theories" and never challenged the accuracy of that quotation. (25:119-20 (Nilsen)). Seventh, Buckingham testified that he had previously said the separation of church and state is a myth and not something that he supports. (P-44/P-804; P-47/P-791; 3:141-42 (B. Callahan); 7:32-33 ©. Brown); 31:66-67 (Maldonado)). Buckingham also said: "It is inexcusable to have a book that says man descended from apes with nothing to counterbalance it." (P-44/P-804; 30:77-78 (Bernhard-Bubb)). Finally, after the meeting, Buckingham stated: "This country wasn't founded on Muslim beliefs or evolution. This country was founded on Christianity and our students should be taught as such." (P-46/P-790; 31:63 (Maldonado)).

We will now provide our findings regarding the June 14, 2004 Board meeting. Initially, we note that the subject of the biology textbook did not appear on the agenda of the meeting but members of the public made comments, and the

Board continued to debate the subject of the biology textbook. Second, Buckingham's wife, Charlotte, gave a speech that exceeded the normal time protocols during the public comment section in which she explained that "evolution teaches nothing but lies," quoted from Genesis, asked "how can we allow anything else to be taught in our schools," recited gospel verses telling people to become born again Christians, and stated that evolution violated the teachings of the Bible. (P-53/P-793; 4:55-56 (B. Rehm); 6:71 ©. Rehm); 7:34-35 ©. Brown); 8:104-05 (F. Callahan); 8:63 (J. Brown); 30:107-08 (Bernhard-Bubb); 31:76-77 (Maldonado); 33:37-43 (Bonsell); 29:82-83 (Buckingham); 12:125 (J. Miller); 13:84 (Spahr)). In her deposition, Charlotte Buckingham admitted that she made a speech at the June 14, 2004 Board meeting in which she argued that creationism as set forth in Genesis should be taught at Dover High School and that she read quotations from scripture as part of her speech. ©. Buckingham Dep. at 19-22, April 15, 2005). During this religious speech at a public Board meeting, Board members Buckingham and Geesey said "amen." (7:35 ©. Brown)). Third, Buckingham stood by his opposition to the 2002 edition of the textbook entitled Biology. Fourth, Bonsell and Wenrich said they agreed with Buckingham that creationism should be taught to balance evolution. (P-806/P-54). Fifth, Buckingham made several outwardly religious statements, which include the

following remarks. "Nowhere in the Constitution does it call for a separation of church and state." He explained that this country was founded on Christianity. Buckingham concedes that he said "I challenge you (the audience) to trace your roots to the monkey you came from." He said that while growing up, his generation read from the Bible and prayed during school. He further said "liberals in black robes" were "taking away the rights of Christians" and he said words to the effect of "2,000 years ago someone died on a cross. Can't someone take a stand for him?" (P-806/P-54; 12:126 (J. Miller); 13:85 (Spahr); 30:105-07 (Bernhard-Bubb); P-793/P-53; 31:75-76, 78-79 (Maldonado); 29:71 (Buckingham); 35:81-82 (Baksa); 6:73 ©. Rehm); 4:54-55 (B. Rehm); 6:96 (Eveland); 7:26-27 ©. Brown); 8:63 (J. Brown); 8:105-06 (F. Callahan)).

Finally, although Buckingham, Bonsell, and other defense witnesses denied the reports in the news media and contradicted the great weight of the evidence about what transpired at the June 2004 Board meetings, the record reflects that these witnesses either testified inconsistently, or lied outright under oath on several occasions, and are accordingly not credible on these points.

f. June 2004 – Board Curriculum Committee Meeting

Near the end of the school year in June 2004, the Board Curriculum Committee met with the teachers to discuss a list of Buckingham's concerns about

the textbook Biology. (12:114-15 (J. Miller); 35:82 (Baksa); P-132). All of Buckingham's concerns related to the theory of evolution and included such objections as the reference to a species of finch known as Darwin's finch simply because it referred to Darwin and his viewpoint that the textbook did not give "balanced presentation," by which he meant that it did not include the "theory of creationism with God as creator of all life." (7:45-48 ©. Brown)).

A large part of the meeting addressed Buckingham's concern that the teachers were teaching what he referred to as "origins of life," apparently including the origin of species and common ancestry. Jen Miller reiterated that the teachers do not address origins of life, only origin of species. (12:118-120 (J. Miller)).

Also at the meeting Baksa provided those in attendance with several documents including a survey of biology books used in private religious schools in York County, a product profile of a biology textbook used at Bob Jones University, and a document entitled "Beyond the Evolution vs. Creation Debate." The second page of the "Beyond the Evolution vs. Creation Debate" document reads "Views on the Origin of the Universe and Life" and it explains the difference between "Young Earth Creationism (Creation Science)," "Progressive Creationism (Old Earth Creation)," "Evolutionary Creation (Theistic Creation)," "Deistic Evolution (Theistic Evolution)," and "Dysteleological Evolution (Atheistic Evolution)."

Interestingly and notably, the example provided under the Progressive Creation (Old Earth Creation) is that of the "Intelligent Design Movement, Phillip Johnson, Michael Behe." (P-149).

Accordingly, as accurately submitted by Plaintiffs, we find that the Board Curriculum Committee knew as early as June 2004 that ID was widely considered by numerous observers to be a form of creationism. We do not find it coincidental that based upon the previously recited statements and history, some form of creationism was precisely what the Committee wanted to inject into Dover's science classrooms.

Moreover, at the meeting, although the teachers had already watched the video "Icons of Evolution" from the Discovery Institute, at Buckingham's insistence they agreed to review it again and consider using in class any portions that aligned with their curriculum. (26:122 (Baksa)). Although Baksa believed that the teachers had already determined there were no parts in the video that would be appropriate for use in class, the teachers capitulated in order to secure Buckingham's approval to purchase the much needed biology textbook. (35:93-94 (Baksa)).

In the midst of this panoply, there arose the astonishing story of an evolution mural that was taken from a classroom and destroyed in 2002 by Larry Reeser, the

head of buildings and grounds for the DASD. At the June 2004 meeting, Spahr asked Buckingham where he had received a picture of the evolution mural that had been torn down and incinerated. Jen Miller testified that Buckingham responded: "I gleefully watched it burn." (12:118 (J. Miller)). Buckingham disliked the mural because he thought it advocated the theory of evolution, particularly common ancestry. (26:120 (Baksa)). Burning the evolutionary mural apparently was insufficient for Buckingham, however. Instead, he demanded that the *teachers agree that there would never again be a mural depicting evolution in any of the classrooms and in exchange, Buckingham would agree to support the purchase of the biology textbook in need by the students*. (36:56-57 (Baksa) (emphasis added)).

Finally, Baksa's testimony revealed that there was some mention of the words "intelligent design" at the meeting but he cannot recall who raised the subject. In fact, to the best of his knowledge at the time, ID amounted to nothing more than two words replacing one word, creationism, used by Buckingham at a Board meeting earlier that month. (35:96-98 (Baksa)). Baksa's testimony supports Plaintiffs' argument that at a point in June 2004, creationism began to morph into ID in the minds of the Board's thought leaders.

g. <u>July 2004 – Buckingham Contacted Richard Thompson and Learned about Pandas</u>

At some point before late July 2004, Buckingham contacted the Thomas More Law Center (hereinafter "TMLC") for the purpose of seeking legal advice and spoke with Richard Thompson, President and Chief Counsel for the TMLC. (30:10-12 (Buckingham)). The TMLC proposed to represent the Board, and Buckingham accepted the offer on the Board's behalf. Buckingham and the Board first learned of the creationist textbook Pandas from Richard Thompson at some point before late July 2004. (29:107-08 (Buckingham); 30:10-12, 15-16 (Buckingham)).

h. July 2004 – New Edition of Biology Textbook Discovered

In July 2004, after the teachers discovered that there was a 2004 edition of the textbook Biology available, the Board agreed to defer consideration of purchasing a new textbook at its July 12, 2004 meeting until it could review the 2004 edition. (12:127 (J. Miller); 13:30 (Spahr)). In July 2004, Spahr, Miller, and Baksa met to review the 2004 edition and compared the sections on evolution with those found in the 2002 edition. They then created a document delineating the differences. (12:127-29 (J. Miller)).

i. August 2004 – Buckingham and Other Board Members Tried to Prevent Purchase of Standard Biology Textbook

On August 2, 2004 the Board met and one of the agenda items was the

approval of the 2004 edition of Biology. A few days prior to this meeting, Casey Brown received a telephone call from Baksa who told her that Buckingham recommended that the District purchase Pandas as a supplemental textbook. (7:52-53 ©. Brown); 8:64 (J. Brown)). Jeff Brown then went to Harkins' home to pick up a copy of Pandas at which point she told him that she wanted the school District to purchase the book. (8:65 (J. Brown)).

Subsequently, at the August 2, 2004 meeting, Buckingham opposed the purchase of Biology, which was recommended by the faculty and administration, unless the Board also approved the purchase of Pandas as a companion text. Only eight members of the Board were present on August 2, 2004 and the initial vote to approve the purchase of Pandas failed on a four to four vote with Buckingham, Harkins, Geesey, and Yingling voting for it. (8:68 (J. Brown); 29:105-06 (Buckingham); P-67). After Buckingham stated that he had five votes in favor of purchasing Pandas and if the Board approved the purchase of Pandas, he would release his votes to also approve the purchase of Biology, Yingling changed her vote and the motion to approve the purchase of Biology passed. (P-67; 8:68-69 (J. Brown)). At trial, Buckingham testified that at the meeting he specifically said "if he didn't get his book, the district would not get the biology book." (29:106 (Buckingham)).

j. August 26, 2004 – Solicitor's Warning to Board

On August 26, 2004, Board Solicitor Stephen S. Russell sent an email to Nilsen which indicated he spoke with Richard Thompson of the TMLC and that "[t]hey refer to the creationism issue as 'intelligent design.'" (P-70). The email proceeded to explain the following:

> They [TMLC] have background knowledge and have talked to school boards in West Virginia and Michigan about possible litigation. However, nothing has come about in either state. This suggests to me that no one is adopting the textbook because, if they were, one can safely assume there would have been a legal challenge by someone somewhere . . . *I guess my main concern at the moment, is that even if use of the text is purely voluntary, this may still make it very difficult to win a case.* I say this because one of the common themes in some of the US Supreme Court decisions, especially dealing with silent meditation, is that even though something is voluntary, it still causes a problem because the practice, whatever it may be, was initiated for religious reasons. One of the best examples comes out of the silent meditation cases in Alabama which the court struck down because the record showed that the statute in question was enacted for religious reasons. *My concern for Dover is that in the last several years there has been a lot of discussion, news print, etc. for putting religion back in the schools. In my mind this would add weight to a lawsuit seeking to enjoin whatever the practice might be.*

Id. (emphasis added). Nilsen subsequently shared this email with everyone present at the Board Curriculum Committee meeting on August 30, 2004, including Buckingham, Bonsell, and Harkins. (25:135-36 (Nilsen)). Additionally, both

Nilsen and Baksa admitted that they knew the email referred to the news reports of the June 2004 meetings. (25:135-36, 138-39 (Nilsen); 35:105-06, 111-12 (Baksa)).

There is no evidence that the Board heeded even one iota of the Solicitor's detailed and prudent warning. We also find the email to be persuasive, additional evidence that the Board knew that ID is considered a form of creationism.

k. August 30, 2004 – Board Curriculum Committee Forced Pandas on the Teachers as Reference Text

On August 30, 2004, the Board Curriculum Committee met with Spahr, Miller, Nilsen, Baksa, Bonsell, Buckingham, Harkins, and Casey Brown with the principal subject of discussion being Pandas and how it would be used in the classroom. (12:134 (J. Miller)). Although Spahr expressed concern that the textbook taught ID, which she equated with creationism, Buckingham wanted Pandas to be used in the classroom as a comparison text side-by-side the standard biology textbook. (12:135 (J. Miller); 29:104-05 (Buckingham)). Despite the fact that the teachers strongly opposed using Pandas as a companion text, they agreed that Pandas could be placed in the classroom as a reference text as a compromise with the Board. (29:111 (Buckingham); 12:136 (J. Miller); 13:88 (Spahr)). Baksa testified that no one could construe the teachers as having supported Pandas in any way, reference text or otherwise, which is evidenced by Jen Miller's statement that

if the teachers compromised with the Board, "maybe this will go away again." (35:120 (Baksa); 12:136 (J. Miller)). It is patently evident that by this point, the teachers were both weary from the extended contention concerning the teaching of evolution, and wary of retribution in the event they persisted in opposing Buckingham and his cohorts on the Board.

Baksa testified that during this time period he researched Pandas and ID, which included directing his secretary to go to the webpage for the Institute for Creation Research. (35:113-14 (Baksa); D-35). The afore-referenced webpage states that Pandas "contains interpretations of classic evidences in harmony with the creation model" and he testified on cross-examination that he was aware of such information when he researched Pandas. (35:114-15 (Baksa)). The fact that Baksa contradicted this testimony on re-direct and stated that he had never read the webpage has an unfortunate and negative impact on his credibility in this case.

l. October 2004 – Arrangement for Donation of Sixty Copies of Pandas

The October 4, 2004 Board meeting agenda indicated that Nilsen had accepted a donation of 60 copies of the text Pandas. (P-78 at 9). There is no evidence that Bonsell, Buckingham or any other individual disclosed the source of the donation until it was finally admitted at trial, despite the fact that Larry Snook, a former Board member, inquired as to the source of the donation at a November

2004 Board meeting. (30:47 (Buckingham); 33:30 (Bonsell)).

The testimony at trial stunningly revealed that Buckingham and Bonsell tried to hide the source of the donations because it showed, at the very least, the extraordinary measures taken to ensure that students received a creationist alternative to Darwin's theory of evolution. To illustrate, we note that at January 3, 2005 depositions taken pursuant to an order of this Court so Plaintiffs could decide whether to seek a temporary restraining order, upon repeated questioning by Plaintiffs' counsel on this point, *neither Buckingham nor Bonsell provided any information about Buckingham's involvement in the donation or about a collection he took at his church*. (30:50-56 (Buckingham); 33:31-35 (Bonsell) (emphasis added)). Buckingham actually made a plea for donations to purchase Pandas at his church, the Harmony Grove Community Church, on a Sunday before services and a total of $850 was collected as a result. (30:38-40 (Buckingham)). As proof of such donation amount, Plaintiffs introduced into evidence a check in the amount of $850 indorsed to Donald Bonsell, Alan Bonsell's father, drawn on Buckingham's account jointly held with his wife, with the notation "Of Pandas and People" appearing on the check. (P-80; 30:46-47 (Buckingham)). Alan Bonsell gave the money to his father who purchased the books. (33:131-32 (Bonsell)). When Spahr received the shipment of books and began to unpack them, she discovered a

catalogue from the company that sold the books listing Pandas under "Creation Science." (13:94-5 (Spahr); P-144 at 29).

When we were moved to question Bonsell regarding this sequence of events at trial, he testified that his father served as the conduit for the funds from Buckingham's church because: "He agreed to – he said that he would take it, I guess, off the table or whatever, because of seeing what was going on, and with Mrs. Callahan complaining at the Board meetings not using funds or whatever." (33:129 (Bonsell)).

As we will discuss in more detail below, the inescapable truth is that both Bonsell and Buckingham lied at their January 3, 2005 depositions about their knowledge of the source of the donation for Pandas, which likely contributed to Plaintiffs' election not to seek a temporary restraining order at that time based upon a conflicting and incomplete factual record. This mendacity was a clear and deliberate attempt to hide the source of the donations by the Board President and the Chair of the Curriculum Committee to further ensure that Dover students received a creationist alternative to Darwin's theory of evolution. We are accordingly presented with further compelling evidence that Bonsell and Buckingham sought to conceal the blatantly religious purpose behind the ID Policy.

m. October 7, 2004 – Board Curriculum Committee Drafted Curriculum Change

In September 2004, acting on instructions of the Board, Baksa prepared a change to the biology curriculum which stated: "Students will be made aware of gaps in Darwin's theory and of other theories of evolution" and contained no reference text. (P-73; 35:122 (Baksa)). The Court has been presented with no evidence that the Board asked Baksa to initiate such changes to the biology curriculum to improve science education in the Dover school system, as will be elaborated upon below.

The Board Curriculum Committee met on October 7, 2004 to discuss changing the biology curriculum, without inviting the science teachers. (35:124 (Baksa)). As Casey Brown was absent, the Board members present with Baksa were Buckingham, Bonsell, and Harkins, and the meeting involved a discussion of various positions regarding the proposed curriculum change. (P-81; 35:125 (Baksa); 29:113 (Buckingham)). The Board Curriculum Committee ultimately adopted, within a matter of minutes, Bonsell's alternative, which states: "Students will be made aware of gaps/problems in Darwin's theory and of other theories of evolution, including but not limited to intelligent design." (P-82; 35:125 (Baksa)). The Board Curriculum Committee's proposed change also called for Pandas to be cited as a reference text. (35:125 (Baksa)). The curriculum change proposed by

the Board Curriculum Committee and the change proposed by the administration and accepted by the science faculty, were circulated to the full Board by memoranda dated October 13, 2004. (P-84A; P-84B).

n. October 18, 2004 – Curriculum Change Resolution Passed

On October 18, 2004, the Board passed by a 6-3 vote, a resolution that amended the biology curriculum as follows:

> Students will be made aware of gaps/problems in Darwin's theory and of other theories of evolution including, but not limited to, intelligent design.
> Note: Origins of Life is not taught.

In addition, the Board resolution stated that this subject is to be covered in lecture form with Pandas to be a reference book. (7:89-90 ©. Brown); P-88; P-209 at 1646; P-84C). Board members Bonsell, Buckingham, Harkins, Geesey, Cleaver, and Yingling voted for the resolution with Noel Wenrich and Casey and Jeff Brown voting against it. (7:89-90 ©. Brown); P-88).

Compelling evidence was presented at trial that in passing the resolution the Board deviated from its regular practice in important respects. "The normal procedures were not followed at all in making this change." (7:79 ©. Brown)). First, the Board typically addressed curriculum changes an entire year in advance of implementation; however, the change to the biology curriculum was initiated

during the 2004-05 school year to be effective that year. (7:78-79 ©. Brown)). Second, standard Board practice dictated two meetings to be held per month, a planning meeting in which items for consideration were listed on its agenda *before* they were listed for resolution on the agenda at the action meeting held later in the month. The change to the biology curriculum, however, was placed on the Board's agenda for the first time during an action meeting, which several witnesses testified to be irregular. (7:24-25, 77-78 ©. Brown); 26:11 (Nilsen); 4:3-5 (B. Callahan); 29:118 (Buckingham)). Third, Board practice called for the District Curriculum Committee to meet and discuss the proposed curriculum change, which Nilsen suggested in this case; however, not surprisingly, the Board overruled that suggestion. (7:72-73 ©. Brown); 26:8-10 (Nilsen)). Although the administration did send the proposed change to the District Curriculum Committee and received feedback from two members, including an opposition and a request for the District Curriculum to meet, no evidence has been presented that either suggestion was acted upon by the Board. (P-151; D-67; 7:80-82 ©. Brown); 35:7-8 (Baksa)). Finally, the Board brazenly chose not to follow the advice of their only science-education resources as the teachers were not included in the process of drafting the language adopted by the Board Curriculum Committee. (7:82-83 ©. Brown)).

In addition to deviating from standard Board practice in multiple respects,

defense witnesses testified that the rush to bring the curriculum change to a vote occurred because the issue had been debated for the previous six months and more importantly, the Board was about to lose two Board members, Wenrich and Cleaver, who had been a part of those discussions. (26:10-12 (Nilsen); 33:113-14 (Bonsell)). The record contains no evidence of any public Board meetings in which the Board discussed ID; however, the evidence does show that the Board discussed creationism within that six month period. In fact, the evidence reveals that Buckingham wanted the Board to vote on the resolution on October 18, 2004 because he thought he had sufficient votes to pass the resolution adopted at the October 7, 2004 Board Curriculum Committee meeting. (29:113-16 (Buckingham)).

Prior to the vote at the October 18, 2004 meeting, science teachers Spahr and Miller, as well as members of the public spoke outwardly against the curriculum change. (13:41-42 (J. Miller); 13:88-93 (Spahr)). Spahr made clear in her statement to the Board that the teachers' agreement to point out "flaws/problems with Darwin's theory," not to teach origins of life, and to have Pandas available as a reference text, were all compromises with the Board Curriculum Committee, after what she described as "a long and tiresome process." (13:91-92 (Spahr)). She additionally stated that the change was being railroaded through without input

from the teachers or the District Curriculum Committee, and no member of the administration or Board disagreed. (13:91-93 (Spahr); 35:126 (Baksa)). Finally, Spahr warned the full Board that ID amounted to creationism and could not be taught legally. (24:102 (Nilsen); 35:14-15 (Baksa)).

Baksa provided highly pertinent information concerning the position of the teachers throughout this process. He testified that the teachers did not support Pandas in any way, but that they made compromises to insure the purchase of the biology book entitled Biology. (35:119-20 (Baksa)). Also, he testified that any suggestion the teachers supported any part of the curriculum change must be soundly rejected. (35:20-21 (Baksa)). The unrebuted evidence reveals that the teachers had to make unnecessary sacrifices and compromises advantageous toward Board members, who were steadfastly working to inject religion in the classroom, so that their students would have a biology textbook that should have been approved as a matter of course.

Remarkably, the 6-3 vote at the October 18, 2004 meeting to approve the curriculum change occurred with absolutely no discussion of the concept of ID, no discussion of how presenting it to students would improve science education, and no justification was offered by any Board member for the curriculum change. (26:21 (Nilsen); 35:127-38 (Baksa); 8:36 ©. Brown); 8:76 (J. Brown); 12:139-40

(J. Miller); 13:102 (Spahr); 32:25-26, 40 (Cleaver); 30:23-25 (Buckingham); 31:182-83 (Geesey); 34:124-26 (Harkins); 6:105-06 (Eveland)). Furthermore, Board members somewhat candidly conceded that they lacked sufficient background in science to evaluate ID, and several of them testified with equal frankness that they failed to understand the substance of the curriculum change adopted on October 18, 2004. (31:175, 181-82 (Geesey); 32:49-50 (Cleaver); 34:117-18, 124-25 (Harkins)).

In fact, one unfortunate theme in this case is the striking ignorance concerning the concept of ID amongst Board members. Conspicuously, Board members who *voted for* the curriculum change testified at trial that they had utterly no grasp of ID. To illustrate, consider that Geesey testified she did not understand the substance of the curriculum change, yet she voted for it. (31:181-82 (Geesey); 29:11-12 (Buckingham); Buckingham Dep. 1:59-61, January 3, 2005; 34:48-49 (Harkins); 33:112-13 (Bonsell); 26:21 (Nilsen)). Moreover, as she indicated on multiple occasions, in voting for the curriculum change, Geesy deferred completely to Bonsell and Buckingham. (31:154-55, 161-62, 168, 184-87, 190 (Geesey)). Second, Buckingham, Chair of the Curriculum Committee at the time, admitted that he had no basis to know whether ID amounted to good science as of the time of his first deposition, which was two and a half months after the ID Policy was

approved, yet he voted for the curriculum change. (30:32-33 (Buckingham)). Third, Cleaver voted for the curriculum change despite the teachers' objections, based upon assurances from Bonsell. (32:23-25 (Cleaver)). Cleaver admittedly knew nothing about ID, including the words comprising the phrase, as she consistently referred to ID as "intelligence design" throughout her testimony. In addition, Cleaver was bereft of any understanding of Pandas except that Spahr had said it was not a good science book which should not be used in high school. (32:45-46 (Cleaver)). In addition, Superintendent Nilsen's entire understanding of ID was that "evolution has a design." (26:49-50 (Nilsen)).

Despite this collective failure to understand the concept of ID, which six Board members nonetheless felt was appropriate to add to ninth grade biology class to improve science education, the Board never heard from any person or organization with scientific expertise about the curriculum change, save for consistent but unwelcome advices from the District's science teachers who uniformly opposed the change. (29:109 (Buckingham)). In disregarding the teachers' views, the Board ignored undeviating opposition to the curriculum change by the one resource with scientific expertise immediately at its disposal. The only outside organizations which the Board consulted prior to the vote were the Discovery Institute and TMLC, and it is clear that the purpose of these contacts

was to obtain legal advice, as opposed to science education information. (33:111-12 (Bonsell); 29:130, 137-43, 30:10-14 (Buckingham)). The Board received no materials, other than Pandas, to assist them in making their vote. Nor did anyone on the Board or in the administration ever contact the NAS, the AAAS, the National Science Teachers' Association, the National Association of Biology Teachers, or any other organization for information about ID or science education before or after voting for the curriculum change. (33:113 (Bonsell); 30:24-27 (Buckingham)). While there is no requirement that a school board contact any of the afore-referenced organizations prior to enacting a curriculum change, in this case a simple glance at any one of their websites for additional information about ID and any potential it may have to improve science education would have provided helpful information to Board members who admittedly had no comprehension whatsoever of ID. As Dr. Alters' expert testimony demonstrated, all of these organizations have information about teaching evolution readily available on the internet and they include statements opposing the teaching of ID. (14:74-99 (Alters)).

Although the resolution passed, it was not without opposition. Both the Superintendent and Assistant Superintendent, Nilsen and Baksa, opposed the curriculum change. (35:126 (Baksa)). Baksa testified that he still feels the

curriculum change was wrong. (35:127 (Baksa)). Both Casey and Jeff Brown, who voted against the resolution, resigned at the conclusion of the October 18, 2004 Board meeting. The following excerpt from Casey Brown's poignant resignation speech speaks volumes about what had occurred within the Board by that time:

> There has been a slow but steady marginalization of some board members. Our opinions are no longer valued or listened to. Our contributions have been minimized or not acknowledged at all. A measure of that is the fact that I myself have been twice asked within the past year if I was 'born again.' No one has, nor should have the right, to ask that of a fellow board member. An individual's religious beliefs should have no impact on his or her ability to serve as a school board director, nor should a person's beliefs be used as a yardstick to measure the value of that service.
>
> However, it has become increasingly evident that it is the direction the board has now chosen to go, holding a certain religious belief is of paramount importance.

7:92-93 ©. Brown).

Additionally, at the following meeting, Board member Wenrich, who opposed the expedited vote on October 18, 2004 and engaged in parliamentary measures to have the vote delayed until the community could properly debate the issue while considering the science teachers' position, resigned and stated the following:

> I was referred to as unpatriotic, and my religious beliefs were questioned. I served in the U.S. Army for 11 years and six years on the board. Seventeen years of my life have been devoted to public service, and my religion is personal. It's between me, God, and my pastor.

P-810; 30:126-30 (Bernhard-Bubb); 4:11-12 (B. Callahan).

The evidence clearly reveals that Board members who voted in favor of the curriculum change blindly adopted the recommendations of the architects of the ID Policy, Bonsell and Buckingham, with respect to their decision to incorporate it as part of the high school biology curriculum, while disregarding opposition by the science teachers and administration. (31:154-68 (Geesey)).

o. Development of Statement to be Read to Students

After the curriculum was changed, Baksa was given the task of preparing a statement to be read to students before the evolution unit in biology commenced. The persuasive evidence presented at trial demonstrates that the final version of the statement communicated a very different message about the theory of evolution than the language that Baksa and senior science teacher Jen Miller proposed. (36:27 (Baksa)).

First, Baksa's initial draft of the statement described Darwin's theory of evolution as the "*dominant scientific theory*;" however, the Board removed such language from the final version. (D-91; 36:22-24 (Baksa)). Second, Baksa's draft

stated that "there are gaps in Darwin's theory for which there is *yet* no evidence;" however, the Board selectively edited out the word "yet" so that the statement is read in a considerably different light to be "there are gaps in Darwin's theory for which there is no evidence." (D-91; 36:26-28 (Baksa)). Third, after Jen Miller reviewed the statement at Baksa's suggestion, she suggested that language be added that there is a "significant amount of evidence" supporting Darwin's theory. Although Baksa felt this was an accurate statement about the scientific theory of evolution, he removed such language because he understood that the Board would not approve it as written. (D-91; 36:24-26 (Baksa)).

As previously noted, the final version of the statement prepared by Defendants to be read to students in ninth grade biology class states, as follows:

> The Pennsylvania Academic Standards require students to learn about Darwin's Theory of Evolution and eventually to take a standardized test of which evolution is a part.
>
> Because Darwin's Theory is a theory, it continues to be tested as new evidence is discovered. The Theory is not a fact. Gaps in the Theory exist for which there is no evidence. A theory is defined as a well-tested explanation that unifies a broad range of observations.
>
> Intelligent Design is an explanation of the origin of life that differs from Darwin's view. The reference book, Of Pandas and People, is available for students who might be interested in gaining an understanding of what Intelligent Design actually involves.

> With respect to any theory, students are encouraged to keep an open mind. The school leaves the discussion of the Origins of Life to individual students and their families. As a Standards-driven district, class instruction focuses upon preparing students to achieve proficiency on Standards-based assessments.

P-124.

Subsequently, on January 6, 2005, the teachers sent a memo to the Board requesting that they be released from any obligation to read the statement. (36:97 (Linker)). The memo provides, in relevant part, as follows:

> You have indicated that students may 'opt-out' of this portion [the statement read to students at the beginning of the biology evolution unit] of the class and that they will be excused and monitored by an administrator. We respectfully exercise our right to 'opt-out' of the statement portion of the class. We will relinquish the classroom to an administrator and we will monitor our own students. This request is based upon our considered opinion that reading the statement violates our responsibilities as professional educators as set forth in the Code of Professional Practice and Conduct for Educators[.]
>
> INTELLIGENT DESIGN IS NOT SCIENCE. INTELLIGENT DESIGN IS NOT BIOLOGY. INTELLIGENT DESIGN IS NOT AN ACCEPTED SCIENTIFIC THEORY.
>
> I believe that if I as the classroom teacher read the required statement, my students will inevitably (*and understandably*) believe that Intelligent Design is a valid scientific theory, perhaps on par with the theory of evolution. That is not true. To refer the students to 'Of

> Pandas and People' as if it is a scientific resource breaches my ethical obligation to provide them with scientific knowledge that is supported by recognized scientific proof or theory.

P-121 (emphasis in original).

Administrators were thus compelled to read the statement to ninth graders at Dover High School in January 2005 because of the refusal by the teachers to do so. (25:56-57 (Nilsen); 35:38 (Baksa)). The administrators read the statement again in June 2005. By that time, Defendants had modified the statement to refer to other, unnamed books in the library that relate to ID; however Pandas remains the only book identified by name in the statement. Defendants offered no evidence concerning whether the other books can be found in the library, including whether they are placed near Pandas. (P-131; 35:40, 42-43 (Baksa)).

p. Newsletter Published by the Board

As we previously explained in detail, the Board mailed a newsletter to the entire Dover community in February 2005, which was prepared in conjunction with the TMLC. (P-127). Additionally, on April 23, 2005, lead defense expert Professor Behe made a presentation on ID to Dover citizens at the Board's request. (Joint Stip. of Fact ¶ 11).

q. Effect of Board's Actions on Plaintiffs

Plaintiffs provided compelling testimony as to the harm caused by the

Board's ID Policy on their children, families, and themselves in consistent, but personal ways. Plaintiffs believe that ID is an inherently religious concept and that its inclusion in the District's science curriculum interferes with their rights to teach their children about religion. (3:118-19 (Kitzmiller); 4:13-15 (B. Callahan); 6:77-78 ©. Rehm); 6:106 (Eveland); 16:26, 30 (Stough); 17:147-48 (Leib)). Plaintiffs additionally testified that their children confront challenges to their religious beliefs at school because of the Board's actions, that the Board's actions have caused conflict within the family unit, and that there is discord in the community. (6:77-78 (Rehm); 6:38-39 (Smith); 17:146-47 (Leib)).

The testimony of Joel Leib, whose family has lived in Dover for generations, is representative of the Plaintiffs' harm caused by the Board's actions in enacting the ID Policy.

> Well, it's driven a wedge where there hasn't been a wedge before. People are afraid to talk to people for fear, and that's happened to me. They're afraid to talk to me because I'm on the wrong side of the fence.

17:146-47 (Leib).

Moreover, Board members and teachers opposing the curriculum change and its implementation have been confronted directly. First, Casey Brown testified that following her opposition to the curriculum change on October 18, 2004, Buckingham called her an atheist and Bonsell told her that she would go to hell.

(7:94-95; 8:32 ©. Brown)). Second, Angie Yingling was coerced into voting for the curriculum change by Board members accusing her of being an atheist and un-Christian. (15:95-97 (Sneath)). In addition, both Bryan Rehm and Fred Callahan have been confronted in similarly hostile ways, as have teachers in the DASD. (4:93-96 (B. Rehm); 8:115-16 (F. Callahan); 14:34-35 (Spahr)).

r. Defendants Presented No Convincing Evidence that They were Motived by Any Valid Secular Purpose

Although Defendants attempt to persuade this Court that each Board member who voted for the biology curriculum change did so for the secular purposed of improving science education and to exercise critical thinking skills, their contentions are simply irreconcilable with the record evidence. Their asserted purposes are a sham, and they are accordingly unavailing, for the reasons that follow.

We initially note that the Supreme Court has instructed that while courts are "normally deferential to a State's articulation of a secular purpose, it is required that the statement of such purpose be sincere and not a sham." Edwards, 482 U.S. at 586-87 (citing Wallace, 472 U.S. at 64)(Powell, J., concurring); id. at 75 (O'Connor, J., concurring in judgment). Although as noted Defendants have consistently asserted that the ID Policy was enacted for the secular purposes of improving science education and encouraging students to exercise critical thinking

skills, the Board took none of the steps that school officials would take if these stated goals had truly been their objective. The Board consulted no scientific materials. The Board contacted no scientists or scientific organizations. The Board failed to consider the views of the District's science teachers. The Board relied solely on legal advice from two organizations with demonstrably religious, cultural, and legal missions, the Discovery Institute and the TMLC. Moreover, Defendants' asserted secular purpose of improving science education is belied by the fact that most if not all of the Board members who voted in favor of the biology curriculum change conceded that they still do not know, nor have they ever known, precisely what ID is. To assert a secular purpose against this backdrop is ludicrous.

Finally, although Defendants have unceasingly attempted in vain to distance themselves from their own actions and statements, which culminated in repetitious, untruthful testimony, such a strategy constitutes additional strong evidence of improper purpose under the first prong of the Lemon test. As exhaustively detailed herein, the thought leaders on the Board made it their considered purpose to inject some form of creationism into the science classrooms, and by the dint of their personalities and persistence they were able to pull the majority of the Board along in their collective wake.

Any asserted secular purposes by the Board are a sham and are merely secondary to a religious objective. McCreary, 125 S. Ct. at 2735; accord, e.g., Santa Fe, 530 U.S. at 308 ("it is . . . the duty of the courts to 'distinguish a sham secular purpose from a sincere one.'" (citation omitted)); Edwards, 482 U.S. at 586-87 ("While the Court is normally deferential to a State's articulation of a secular purpose, it is required that the statement of such purpose be sincere and not a sham."). Defendants' previously referenced flagrant and insulting falsehoods to the Court provide sufficient and compelling evidence for us to deduce that any allegedly secular purposes that have been offered in support of the ID Policy are equally insincere.

Accordingly, we find that the secular purposes claimed by the Board amount to a pretext for the Board's real purpose, which was to promote religion in the public school classroom, in violation of the Establishment Clause.

2. Effect Inquiry

Although Defendants' actions have failed to pass constitutional muster under the endorsement test and pursuant to the purpose prong of Lemon, thus making further inquiry unnecessary, we will briefly address the final Lemon prong relevant to our inquiry, which is effect, in the interest of completeness. The Supreme Court has instructed the following with regard to the Lemon effect prong:

> The core notion animating the requirement that . . . [an official act's] 'principal or primary effect . . . be one that neither advances nor inhibits religion,' is not only that government may not be overtly hostile to religion but also that it may not place its prestige, coercive authority, or resources behind a single religious faith or behind religious belief in general, compelling nonadherents to support the practices or proselytizing of favored religious organizations and conveying the message that those who do not contribute gladly are less than full members of the community.

Texas Monthly, Inc. v. Bullock, 489 U.S. 1, 9 (1989)(plurality op.)(internal citations omitted).

While the Third Circuit formally treats the endorsement test and the Lemon test as distinct inquiries to be treated in succession, it has continued to recognize the relationship between the two. Moreover, because the Lemon effect test largely covers the same ground as the endorsement test, we will incorporate our extensive factual findings and legal conclusions made under the endorsement analysis by reference here, in accordance with Third Circuit practice. Freethought, 334 F.3d at 269 (The court noted that "effect under the Lemon test is cognate to endorsement," and hence the court did not hesitate simply to "incorporate [its] discussion of endorsement" into the effect analysis.).

To briefly reiterate, we first note that since ID is not science, the conclusion is inescapable that the only real effect of the ID Policy is the advancement of

religion. See McLean, 529 F. Supp. at 1272. Second, the disclaimer read to students "has the effect of implicitly bolstering alternative religious theories of origin by suggesting that evolution is a problematic theory even in the field of science." Selman, 390 F. Supp. 2d at 1308-09. Third, reading the disclaimer not only disavows endorsement of educational materials but also "juxtaposes that disavowal with an urging to contemplate alternative religious concepts implies School Board approval of religious principles." Freiler, 185 F.3d at 348.

The effect of Defendants' actions in adopting the curriculum change was to impose a religious view of biological origins into the biology course, in violation of the Establishment Clause.

G. Challenge under Pennsylvania Constitution

In addition to the Establishment Clause challenge, Plaintiffs assert that Defendants' actions in enacting the ID Policy violate their rights under the Pennsylvania Constitution, specifically Art. I, § 3.[23] Article I, § 3 of the Pennsylvania Constitution states the following:

> All men have a natural and indefeasible right to worship Almighty God according to the dictates of their own consciences; no man can of right be compelled to attend,

[23] Although Plaintiffs' complaint asserts violations of their constitutional rights under Art. I, § 3, as well as Art. III, §§ 15 and 29, Plaintiffs' post-trial submissions only reference Art. I, § 3. We will accordingly consider whether Plaintiffs' rights were violated pursuant to Art. I, § 3 of the Pennsylvania Constitution.

> erect or support any place of worship, or to maintain any ministry against his consent; no human authority can, in any case whatever, control or interfere with the rights of conscience, and no preference shall ever be given by law to any religious establishments or modes of worship.

Pa. Const. Art. I, § 3 (2005).

As we explained in our March 10, 2005 Order, the Pennsylvania Supreme Court has opined in Springfield Sch. Dist. v. Commonwealth of Pa., 397 A.2d 1154, 1170 (Pa. 1979), that the provisions of Art. I, § 3 do not exceed the limitations in the First Amendment's Establishment Clause. See also Wiest v. Mt. Lebanon Sch. Dist., 320 A.2d 362, 366 (Pa. 1974), cert. denied, 419 U.S. 967 (1974). In discussing the provisions of Art. I, § 3, the Pennsylvania Supreme Court explained:

> The principles enunciated in this part of our Constitution reflected a concern for the protection of the religious freedoms of Pennsylvanians long before the first amendment to the United States Constitution was made applicable to the states through the fourteenth amendment . . . The protection of rights and freedoms secured by this section of our Constitution, however, does not transcend the protection of the first amendment of the United States Constitution.

Wiest, 320 A.2d at 366.

Consequently, our discussion of the issues raised under the federal constitution applies with equal vigor to the issues raised by Plaintiffs that are

grounded in our state constitution. In light of this Court's prior ruling that the ID Policy violates the Establishment Clause of the First Amendment, the Court likewise concludes that the ID Policy is violative of Plaintiffs' rights under the Pennsylvania Constitution.

H. Conclusion

The proper application of both the endorsement and Lemon tests to the facts of this case makes it abundantly clear that the Board's ID Policy violates the Establishment Clause. In making this determination, we have addressed the seminal question of whether ID is science. We have concluded that it is not, and moreover that ID cannot uncouple itself from its creationist, and thus religious, antecedents.

Both Defendants and many of the leading proponents of ID make a bedrock assumption which is utterly false. Their presupposition is that evolutionary theory is antithetical to a belief in the existence of a supreme being and to religion in general. Repeatedly in this trial, Plaintiffs' scientific experts testified that the theory of evolution represents good science, is overwhelmingly accepted by the scientific community, and that it in no way conflicts with, nor does it deny, the existence of a divine creator.

To be sure, Darwin's theory of evolution is imperfect. However, the fact

that a scientific theory cannot yet render an explanation on every point should not be used as a pretext to thrust an untestable alternative hypothesis grounded in religion into the science classroom or to misrepresent well-established scientific propositions.

The citizens of the Dover area were poorly served by the members of the Board who voted for the ID Policy. It is ironic that several of these individuals, who so staunchly and proudly touted their religious convictions in public, would time and again lie to cover their tracks and disguise the real purpose behind the ID Policy.

With that said, we do not question that many of the leading advocates of ID have bona fide and deeply held beliefs which drive their scholarly endeavors. Nor do we controvert that ID should continue to be studied, debated, and discussed. As stated, our conclusion today is that it is unconstitutional to teach ID as an alternative to evolution in a public school science classroom.

Those who disagree with our holding will likely mark it as the product of an activist judge. If so, they will have erred as this is manifestly not an activist Court. Rather, this case came to us as the result of the activism of an ill-informed faction on a school board, aided by a national public interest law firm eager to find a constitutional test case on ID, who in combination drove the Board to adopt an

imprudent and ultimately unconstitutional policy. The breathtaking inanity of the Board's decision is evident when considered against the factual backdrop which has now been fully revealed through this trial. The students, parents, and teachers of the Dover Area School District deserved better than to be dragged into this legal maelstrom, with its resulting utter waste of monetary and personal resources.

To preserve the separation of church and state mandated by the Establishment Clause of the First Amendment to the United States Constitution, and Art. I, § 3 of the Pennsylvania Constitution, we will enter an order permanently enjoining Defendants from maintaining the ID Policy in any school within the Dover Area School District, from requiring teachers to denigrate or disparage the scientific theory of evolution, and from requiring teachers to refer to a religious, alternative theory known as ID. We will also issue a declaratory judgment that Plaintiffs' rights under the Constitutions of the United States and the Commonwealth of Pennsylvania have been violated by Defendants' actions. Defendants' actions in violation of Plaintiffs' civil rights as guaranteed to them by the Constitution of the United States and 42 U.S.C. § 1983 subject Defendants to liability with respect to injunctive and declaratory relief, but also for nominal damages and the reasonable value of Plaintiffs' attorneys' services and costs incurred in vindicating Plaintiffs' constitutional rights.

NOW, THEREFORE, IT IS ORDERED THAT:

1. A declaratory judgment is hereby issued in favor of Plaintiffs pursuant to 28 U.S.C. §§ 2201, 2202, and 42 U.S.C. § 1983 such that Defendants' ID Policy violates the Establishment Clause of the First Amendment of the Constitution of the United States and Art. I, § 3 of the Constitution of the Commonwealth of Pennsylvania.

2. Pursuant to Fed.R.Civ.P. 65, Defendants are permanently enjoined from maintaining the ID Policy in any school within the Dover Area School District.

3. Because Plaintiffs seek nominal damages, Plaintiffs shall file with the Court and serve on Defendants, their claim for damages and a verified statement of any fees and/or costs to which they claim entitlement. Defendants shall have the right to object to any such fees and costs to the extent provided in the applicable statutes and court rules.

s/John E. Jones III
John E. Jones III
United States District Judge