



February 10, 2025

To the state senators of the North Dakota Legislature,

We are North Dakota science educators, including biology and physical science professors, who conduct scientific research and teach college students. We oppose North Dakota SB 2355. Daily, we assess the best ways to teach scientific disciplines and methods and help students develop critical approaches to and evidence-based conclusions about the world around them. We believe that Senate Bill 2355 will harm North Dakota students and the state of North Dakota. In particular, because “Intelligent Design theory” is not a scientific theory but a religious doctrine, we note that incorporating Intelligent Design into the state science standards would impair the intellectual development of primary and secondary school students and have long-term detrimental consequences for the state.

Because this bill aims to change what is taught in science classes, supporting or rejecting Bill 2355 must include an honest discussion of “what is science” and “what is Intelligent Design.” Scientific approaches use a carefully designed scientific method and have requirements that must be met that clearly distinguish science from other ways of knowing. The National Academy of Sciences defines science as the “use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process.” To elaborate, cornerstones of science include the following: 1.) scientific knowledge is based on empirical evidence; 2.) science addresses questions about the natural and material world, and 3.) scientific knowledge is open to revision in light of new evidence.

Intelligent Design lacks evidence, requires the supernatural, and is impervious to revision because it involves no testable hypotheses. Intelligent Design is the claim that biodiversity on earth is the product of a “designer.” However, in a proper scientific approach, a hypothesis requires more than plausibility to be adopted - it requires evidence. In support of the Intelligent Design view, its proponents offer dogmatic statements rather than evidence. For example: “the adaptations we see in living organisms are perfect and thus could not evolve but rather must have been produced by a designer” and “Examples of irreducible complexity are also evidence of a designer because they could not evolve.”

The arguments represent a distraction from the lack of evidence for their hypotheses. Intelligent Design does not satisfy the requirement that science education addresses questions about the natural and material world. Because Intelligent Design requires a “designer,” it is the purview of religion, not science. Indeed, in 2005, a federal court ruled, in *Kitzmiller v. Dover*, that “Intelligent Design is not science and cannot uncouple itself from its creationist and thus religious antecedents.”

In light of these characteristics of Intelligent Design, the Department of Biological Sciences at NDSU has serious reservations about Bill 2355 and the proposed changes to state science standards. The students of North Dakota deserve the best STEM education available. They will be poorly served by an education that erroneously teaches Intelligent Design as a scientific theory. Teaching Intelligent Design in any science class is wrong because it is not science.

Concerns have been raised about American students falling behind international STEM standards. Students graduating from schools teaching Intelligent Design as science would have difficulty at higher education institutions across the country, which would have to provide remedial instruction to undo the damage. If Bill 2355 were passed, North Dakota's ability to attract bioscience and related industries would be negatively impacted. Parents would question the quality of the STEM education their children would receive.

If the bill is passed, the state and its institutions could incur significant legal costs due to lawsuits and court cases. A local school district in Pennsylvania spent roughly 2 million dollars in the *Kitzmiller v. Dover* case. Intelligent Design and creationism represent the extremely narrow religious perspective of a small percentage of Christians and thus has no place in the science classroom. The bill as proposed represents an erosion of separation of church and state and is unconstitutional, as clearly indicated in the decision in *Kitzmiller v. Dover*.

We urge the members of the North Dakota legislature to reject Bill 2355, because it will harm the future of North Dakota and STEM education in the state. Adoption of Bill 2355 will diminish the quality of science teaching in North Dakota and disadvantage children relative to their peers in states that adhere to appropriate science standards. By rejecting Bill 2355, lawmakers will help the state avoid the bad publicity that invariably follows school districts and states that consider teaching Intelligent Design (e.g. the Kansas State Board of Education, 2005). They will avoid expensive lawsuits and legal costs such as those incurred in Pennsylvania in 2005. Most importantly, they will help maintain high standards for STEM education in the state, promote critical thinking in tomorrow's citizens and STEM-based professionals, and help North Dakotans maintain an evidence-based perspective for living in the world today.

Sincerely,

The Department of Biological Sciences, NDSU

DocuSigned by:
Cathy Nelson
F3A0F0AF26A44D8...

DocuSigned by:
Eric Hillen
7156D7FA98AD4BC...

DocuSigned by:
Jennifer L. Hansen
3E39FB787E4944D...

DocuSigned by:
Jilka Kim
7BB1DC9B668E4F2...

DocuSigned by:
Jubia H. Browner
DDC06FE386BB4AC...

DocuSigned by:
Kendra J. Greenlee
91C38751016C4D8...

DocuSigned by:
Kimberly Booth
7B8F10DAE3CF4F1...

DocuSigned by:
Lance Johnson
D565277AA8E44E4...

DocuSigned by:
Lisa Montplaisir
8664E68F4C4D409...

DocuSigned by:
Marinus Otte
599B9316B00549A...

DocuSigned by:
Matthew Smith
BDC8F66F097B494...

DocuSigned by:
Ned Dochtermann
47FD4AE6EE6B4E5...

DocuSigned by:
Sarah A Signor
DA6D98B6F7FB4C0...

DocuSigned by:
Steve Travers
E6FA521B0A094E2...

DocuSigned by:
John J. G...
042BDA045C1F4A1...

DocuSigned by:
Tara Slominski
06BD529E958B489...

DocuSigned by:
Mary Jo Kenyon
3FAA93CF5D5F4A8...