February 11, 2024

TO: North Dakota Senate, Education Committee

RE: Personal Testimony in Opposition of SB 2355

As an individual, a citizen of North Dakota, a resident of Fargo, and as a former high school science teacher, I submit this testimony for consideration. My objective is to urge you to reject Senate Bill 2355 because of the harm it will do to North Dakota students and to the State of North Dakota. For years I have studied the history and philosophy of science and science education. Based on the professional expertise amassed over many years, I offer the following two-pronged testimony in opposition to Senate Bill 2355: It will explain why "the theory of intelligent design" is *not* science and why its inclusion would be detrimental to science education in the state.

Mandating that intelligent design be taught as part of the North Dakota science standards would damage the understanding and critical thinking that we aim to cultivate as part of primary and secondary science education. *A Framework for K-12 Science Education* (NRC, 2012) and the *Next Generation Science Standards* (NGSS Lead States, 2013) articulate that students should come to know science as "a way of knowing" by engaging in practices that help them to understand that "scientific knowledge is based on empirical evidence" (see Appendix H, p. 5). These reform documents are consistent with the *North Dakota Science Content Standards* (ND DPI, 2019), which provide guidance for teachers to help learners understand the process of science that hinges on the gathering and examining of evidence (p. 10). Scientific theories are a type of scientific knowledge. They offer explanations about the natural world, which are consistent with and well-supported by evidence.

Senate Bill 2355 presents intelligent design as a scientific theory, an alternate explanation worth presenting to students for the creation of all life forms. The foundation of this bill is problematic because intelligent design is not a viable scientific theory. "Intelligent design" refers to a notion that living organisms were created in more or less their present forms by an "intelligent designer" (Encyclopedia Britanica, 2025). The argument for intelligent design, which seeks to challenge the established explanation of evolution by natural selection, rests on the linchpin of irreducible complexity – positing that some biological structures are too complex to have evolved in nature on their own (e.g., compound eyes in insects). While perhaps intriguing, intelligent design fails the fundamental tests of science. It's not falsifiable, testable, or based on natural explanations. Instead, intelligent design relies on supernatural intervention.

Many prior attempts to inject intelligent design into K-12 classrooms have found it be a disguise for introducing religious ideas in public education. In 2005's *Kitzmiller v. Dover*, a federal court concluded that the Dover Area School Board's policy requiring the teaching of "intelligent design" was unconstitutional, violating the Establishment Clause of the First Amendment of the U.S. Constitution. Judge John E. Jones III in his ruling stated that intelligent design targets evolution instruction, attempting to misrepresent its status in the scientific community, and, "causes students to doubt its validity without scientific justification, presents students with a religious alternative masquerading as a scientific theory". It is not just that intelligent design is intertwined with religious

views, but the textbooks that were selected to support this instruction clearly demonstrated this position as well. The ruling went on to explain that "[intelligent design] 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."

Incorporating intelligent design into K-12 content standards may seem like an opportunity for learners to explore different viewpoints, or critically examine perspectives, but it is a flawed premise. It would be misplaced in a science classroom. Furthermore, by making this addition, others in the wake of such a decision may demand equal time for other non-scientific viewpoints and, thus, dilute K-12 science education even further. Astrology is not considered as science content, nor crystal healing or tarot reading, because they do not abide by the process of science. They may be considered by some as other ways of knowing, but they are not science; science follows agreed upon guidelines.

In summary, intelligent design is not science and it has no place in K-12 science classrooms. By introducing supernatural explanations into instruction, intelligent design undermines science education. It detracts from critical thinking. Students need not wrestle with asking questions, collecting evidence, and forming explanations about natural phenomena if "by design" can be used as a trump card instead of rigorous inquiry. It is my hope that all students gain an understanding about nature of science and the role of evidence in the development of scientific knowledge during their K-12 years. Our public schools should be preparing the next generation of citizens to use evidence-based reasoning, which will aid them in their future pursuits and enable them to meaningfully engage in civic affairs. For the sake of our teachers and students, based on the reasons outlined in this testimony, I urge you to vote against Senate Bill 2355.

Respectfully submitted,

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Resident of Fargo, ND