


February 8, 2024

Senator Rafferty, Representative Brennan and esteemed members of the Education and Cultural Affairs Committee, my name is Shari Templeton, I am a resident of Newcastle and this year I returned to the classroom after a decade away. I wanted to test drive some of the new open education resources that are just now coming out of field test/pilot phases and that I am working with teachers to explore. I am currently a high school science educator at Wiscasset Middle High School but my 42 years of experience in science education go beyond 32 years in secondary classrooms. I spent 2 years as district K-12 science specialist and 9.5 years as Maine Department of Education Science & Engineering Specialist (when the DOE still had content specialists and supported teachers with content specific professional learning). After I left the DOE, I spent a year with Maine Mathematics and Science Alliance providing professional learning opportunities for Maine science teachers around the shifts in science education called for by *A Framework for K-12 Science Education* and the resulting Next Generation Science Standards (NGSS) which were adopted verbatim by the  Maine Legislature.

I am testifying today in **opposition** to LD 2182, Resolve, Regarding Legislative Review of Portions of Chapter 132: Learning Results: Parameters for Essential Instruction, a Major Substantive Rule of the Department of Education. The Department would have you believe that creating uniform content standards makes it better for educators. What they fail to recognize is that a cookie-cutter approach may do a disservice to some standards. That is clearly the case when we look at the science standards. Without someone at the Department who deeply understands the nuances and intent of NGSS, much is lost when directing potential changes.

The revisions to the Maine Learning Results in Science and Engineering, i.e. NGSS, pose multiple issues:

1. The Department equates Cross Cutting Concepts with Conceptual Understandings. They are fundamentally different.
2. In the introductory page to the standards, the document states that “backgrounds of scientists can have an impact on the nature of their findings” yet neglects to discuss that the scientific community relies extensively on peer review and data to verify their work. There are bad actors in science as in all walks of life; however, the statements made in the DOE document sow seeds of distrust in science which mirrors fringe political views.
3. In the revised document, the Department leadership required the steering committee to add statements under each standard that do little more than distill the intent of the standard down to a single dimension. I fear that this will result in similar unintended consequences like we experienced under the 1997 and 2007 standards documents which encouraged memorization of facts with little application to novel scenarios.
4. Curricular direction is given within the standards document under the Further Explanation sections. Standards are designed to represent end points of instruction not curriculum.
5. The writing team was directed by the Department to incorporate genocide, Wabanaki studies and African American studies into the science standards by inserting curricular suggestions in the clarification/further explanation statements that are only meant to shed light on the intent of the standard. Many of those suggested curricular moves are inappropriate for the grade

band and teachers are not versed in addressing sensitive issues especially at the middle school level.

6. Science standards were adopted five years ago. In the interim we had a multi-year pandemic and the Department removed content specific supports for professional learning. This is far too soon to revise standards.

I was one of many, many Maine teachers who worked with Anita Bernhardt to review and suggest revisions to drafts one and two of the Next Generation Science Standards before their final version was released in 2013. When I began my work at the Department in January of 2014, I could not have anticipated the political games that would keep Maine from adopting NGSS until 2019. As a state science specialist, I worked closely with my counterparts from across the country to begin envisioning how these new science standards would change the look of science education in our classrooms. As an elected board member for the Council of State Science Supervisors (CSSS) and co-chair of the CSSS ad hoc committee that developed the Science Professional Learning Standards, I represented Maine at the table to discuss how best to move our nation forward in STEM education.

The NGSS is more than a new set of standards: the three-dimensional design of the standards is a game-changer that will revolutionize how teachers approach science instruction and how students learn science through phenomena-centered learning. The design was and is grounded in solid scientific and educational research, but the development of curricular materials to support the new standards would take years to develop. Fortunately, several high-quality instructional materials are now available through Open Educational Resources (OER) and others are in pilot or field-test stages. Unlike the textbook companies that immediately slapped stickers on their old products claiming they were NGSS-aligned, these new materials have undergone extensive peer-review. Still, none of this could happen overnight any more than we could expect our teachers to shift their science instruction quickly. It is far too soon to reboot standards that they have had inadequate time to immerse themselves in. The timeline to fully embrace a set of standards is closer to fifteen years.

We have a rogue DOE. The leadership does not utilize the expertise within the Department. The inner circle makes decisions blindly without meaningful dialogue and input from those who are most closely connected to and impacted by their decisions. Instead of listening to teachers and science education experts on the science steering committee who agreed with the lion's share of public comment to stay the course, the Department leadership is pushing forward their agenda while proclaiming without merit that it is what the field wants. The Education and Cultural Affairs Committee is the only body that can provide checks and balances to the Department. I urge you to do so here by voting ought not to pass on LD 2182.

Thank you for allowing me to air my concerns. I welcome any follow up questions.

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