House Education

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HB24-1446 Professional Development for Science Teachers

Typed Text of Testimony Submitted

Name, Position, Representing	Typed Text of Testimony
Nancy Kellogg For themself	I am a retired science educator that worked in many different roles over 45 years mainly in Colorado. I am still actively engaged in improving science education for ALL Colorado students through volunteer work. Much of my previous work involved co-chairing the first Colorado science standards, being the lead on state assessment work, building science education leadership in the state, and providing professional development for pK-12 teachers. I highly support HB 24-1446. As a third generation Coloradan who grew up on the Western slope and worked with many rural school districts and BOCES in the past, it's critical that rural science educators are given high quality evidence-informed professional development. I recommend including in your bill a provision that emphasizes pK-12 at each grade level so there are no gaps in the education of students. Since the first implementation of the Colorado science standards in the 1990's, a major problem has always been providing a seamless pK-12 science program that has high quality instruction at all grade levels. If there are grade level gaps, it's difficult to provide a high quality science education with fidelity for all students. In the current bill (2), it states "Department shall contract with Colorado institutions of higher education". This should be expanded to include informal/nonformal and nonprofit institutions that have a track record for providing high quality evidence-informed science instruction. Examples include: Denver Museum of Nature and Science, Denver Zoo, Denver Botanic Gardens, Colorado Alliance for Environmental Education, Biological Sciences Curriculum Study and many more. It's also critical to include community-based phenomena around science and engineering practices, disciplinary core ideas, and crosscutting concepts. Local community issues are important to engage and motivate students. For students who need intervention strategies this is a great way for them to see the relevance of science in their lives.

	The current incentives for teachers to participate in ongoing professional development is a critical element for the bill. I would also suggest providing mentors/coaches to support science teachers. Thank you for writing this bill.
Janelle Johnson For themself	Greetings, My name is Janelle M. Johnson. I am a professor of STEM Education at MSU Denver in the department of secondary teacher education, and have served as the Principal Investigator for a National Science Foundation Noyce Teacher Scholarship grant to support professional learning by preservice and inservice math and science teachers for nearly ten years. I was also the Principal Investigator on a National Science Foundation grant called Innovative Technology Experiences for Students and Teachers for four years, working with preservice and inservice science teachers. I have been conducting professional development with science teachers since 1997, and my dissertation research focused on the outcomes of professional development. My focus throughout all my work is to help close opportunity gaps, and that has certainly been a challenge for us here in Colorado. The science teachers I have had the honor of collaborating with have done incredible work once they returned to their classrooms. They are passionate about teaching science, and are grateful when they are offered opportunities to extend their learning along with much needed resources. I therefore offer my testimony to fully support HB 24-1446 to equip and support science educators. My hope is that the committee considers the particular needs of rural areas especially, with the additional distances to travel and associated costs. Perhaps scaled support can be offered so that there is proportional engagement across the state. That would go a long way in building trust by rural communities in decisions made in the capital. Remote attendance options would also help address this challenge. Since time invested in professional learning means time away from other personal and professional duties, it is important to consider

	strong incentives for teachers' participation. This also signals their consideration as professionals, which is very meaningful to teachers. It is also important to consider the distinct needs of elementary teachers and secondary teachers. Not only is their preparation quite distinct, but also their demands during the school day. There are outstanding science teacher networks across Colorado that are ready and willing to support implementation of this bill. Please know that the Colorado STEM Ecosystem is available to help conduct outreach and dissemination of any opportunities.
Beverly DeVore-Wedding Amend themself	Thank you for allowing me to comment on HB 24-1446. I support this bill as it provides necessary training for teachers of science, especially teachers from rural areas of Colorado. As a former secondary science teacher in rural Colorado, I know the difficulties of obtaining good professional development. Frequently district-wide professional development in rural schools is one size but it doesn't fit all. I obtained an M.S. in science education to learn more content-specific pedagogical knowledge. When the Meeker Re-1 school district went on a four-day school week, 1994-1997, I was able to travel to the Denver-Metro area for quality science professional learning as well as become active in the Colorado Association of Science Teachers (CAST) leadership and workshops. I also relied on the National Science Teaching Association (NSTA) for professional learning. The association with CAST allowed me to move into the national science educators scene as well. I have served on numerous committees with NSTA, including the chair of the Rural Science Advisory Board, 2019-2022. The leadership opportunities with NSTA led to my election to the presidential chain this year, starting with President-elect this June 1. I served on the Colorado Academic Science Standards Review & Revise Committee in 2017. We used the NGSS as the model and added Colorado-specific content, but there are still teachers unfamiliar with the new standards (implemented in 2021). When I worked in the teacher preparation program at Adams State University (2019-2023), I found that many in-service teachers were still working from older Colorado Academic Science Standards.

	I suggest you expand who the Education Department will contract with to include organizations other than Colorado institutions of higher education. Organizations such as the Denver Museum of Nature and Science, Colorado Project Learning Tree, Denver Zoo, Denver Botanical Gardens, and Eureka! John McConnell Science Museum are only a few of the organizations in Colorado that provide high-quality science professional learning opportunities. In addition, providing teachers, especially rural teachers with travel funds for transportation and lodging will increase participation from science educators. Again, thank you for reading my testimony in support of HB 24-1446 with the suggestions to improve the bill by expanding professional development providers and considering funding for attending these professional development events.