My name is Dr. Ruth Kermish-Allen and I serve as executive director of the Maine Math and Science Alliance – an organization committed to finding inspiring new ways to get people excited about Science, Technology, Engineering, & Math today – so that our youth can become the innovators and workforce of tomorrow. We accomplish this work by providing professional development for more than 350 Maine educators per year. I also serve as a board member for at local school, Appleton Village School, and a mother of 2nd and 5th graders.

I have been talking with educators and administrators across the State about what they want to see in the new version of the science standards – and they are hungry for change. Today’s students need to see the real-world applications and relevance of what they are learning in the classroom. Today’s students need to do more than just listen and memorize, today’s students need to DO science. They need and want to run experiments, they want to see natural phenomena and figure out how it happened through critical thinking and analysis. In summary, our teachers and students want to “practice” real science – to experience that thrill of wonder and discovery.

Our standards should challenge teachers and students to do the work of scientists, not just learn about it, but actually explore, inquire, innovate, and iterate. They should support a child’s innate desire to create, innovate, and ask really intriguing questions about the world around them. These skills are very important to future employers of our children, but more so they are skills that will enable our kids to become active and engaged citizens as they tackle "wicked" problems they encounter throughout life. These topics that reach across scientific disciplines are extremely important as students begin to connect how an understanding of the concepts of energy and matter relates to cause and effect. Educators are ready, they are not afraid of a significant revision. They are hoping that our state’s standards will lead the way towards a science literate citizenry that has been taught with the best that science pedagogy has to offer. Today, our current standards do not reflect that. The last time our science standards were reviewed was also the year that the first iPhone was released. It is safe to say that science and technology have moved leap years beyond what was accepted then. Our state standards are extremely out dated and educators are reacting to their students’ needs in a non-united somewhat inequitable way. Our new standards should lay the groundwork for a strong science literate citizenry that knows how to ask great questions, think critically, solve problems, and analyze multiple explanations.

Maine is already moving full force ahead to realize this type of science education, but at this point in time our assessments do not match these hands-on applied strategies in science. 75% of Maine’s schools districts have already adopted some form of the Next Generation Science Standards (NGSS). Maine’s school districts have already committed thousands of dollars in textbooks and resources aligned to the NGSS. This localized non-
A unified approach to ensuring the best science education for Maine's youth has only added to the inequities between districts and further separated the have's for the have not's of a high quality science education. Where a student lives in Maine should not define the quality of their science education. To ensure that our state standards “raise all boats” instead of a more dispersed and inequitable approach to high quality science education, our new state science standards need to challenge students to practice authentic science. Plus, our state assessments need to reflect this dynamic understanding of science so that classrooms spend time devoted to inspiring the next generation of innovators and the future STEM workforce.

It is with all of this in mind that the Maine Mathematics and Science Alliance strongly recommend that the state of Maine adopt the Next Generation Science Standards as our the science standards to lead out state into the future. It is the best that our nation has to offer the future STEM workforce, young innovators, and engaged citizens of today and tomorrow.