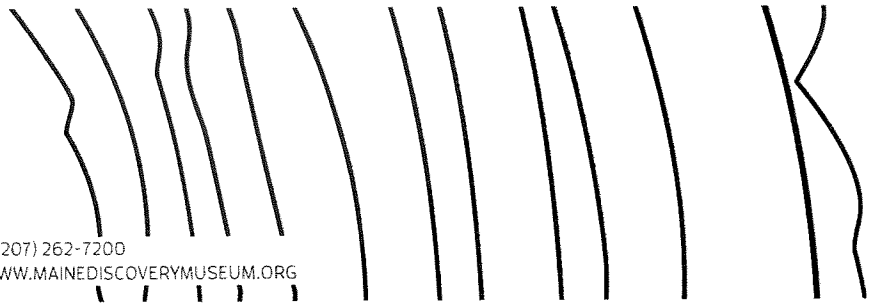


MAINE DISCOVERY MUSEUM

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Senator Rafferty, Representative Brennan, and distinguished members of the Education and Cultural Affairs Committee, my name is Kate Dickerson and I'm the Executive Director of the Maine Discovery Museum. Thank you for the opportunity to testify in support of L.D. 871, An Act to Provide Support for Maine Discovery Museum's Informal Science, Technology, Engineering and Mathematics Education Throughout the State.

The Maine Discovery Museum (MDM) is a regional and state resource with a 20+ year history of serving our community. MDM helps people of all ages to discover the world around them through creative exploration and science.

In the last ten years we've expanded to serve all of Maine, especially in the areas of science, technology, engineering, and math (STEM), through educational outreach and programming, with much of it incorporated in to STEAM programming. This includes not just our vacation camps and daily programming, but also our programs that happen outside of our museum. Some of these programs are part of a nationwide network and others are home grown. With these programs we reach rural and underserved communities all year long and provide rich science content that they cannot get anywhere else in Maine. This is the only exposure to these topics that many of them get. I've provided a fuller explanation of some of our programs in a handout and at the end of this testimony.

We welcome 60,000 people/year through our doors and reach another 12,000-15,000 with these outside programs. It is two of these programs, reaching a statewide audience, that we're asking for support for today: Maine Invention Convention and the Maine Science Festival, both of which align with several goals in Governor Mills' "Maine Jobs & Recovery Plan" as well as the State's new strategic plan in the realms of education, science, economic development, and tourism.

Maine Invention Convention introduces Maine middle school students to entrepreneurship and provides them with the opportunity to explore, design, and invent creative solutions that solve real world problems. MDM provides support to teachers and schools who have Invention Convention programs at their school (either within the school day or as an extracurricular activity), and we host the state championship at the Maine Science Festival every year.

Winners of the state championship go on to compete at the National Invention Convention in June at the Henry Ford Museum, and past Maine winners have done well at Nationals, winning in their categories. All students who've gone to Nationals have come back to Maine with not just a sense of accomplishment, but also an understanding that they can compete with students on a national level. These successes help grow Maine's innovation ecosystem.

programs of
MAINE **DISCOVERY** MUSEUM



Maine Invention Convention, like virtually every other program for students, was deeply impacted by the pandemic, and we are working to rebuild it so that more students from all over the state have the opportunity to participate.

The Maine Science Festival is a five day celebration and exploration of Maine science by the people who do it. It is like an arts festival or music festival, but all about science. The MSF is the only science festival north of Cambridge, MA – and is held in March every year (so Mainers know it's a festival for us). We've served more than 65,000 people since launching in 2015, and have grown from 2.5 days to 5 days with more than 70 events and activities provided at no charge to festival goers. Included in the MSF is a Field Trip Day for 7th and 8th graders around the state, where we work to connect the dots to what they are learning in school with education and career paths that are ahead of them, covering everything from CTE to post-graduate work.

Why are programs like these so important to Maine? Research has shown that 95% of the population learns about science outside of the classroom (Falk, J. H., & Dierking, L. D., 2010, *American Scientist*, vol. 98). And when you look at school-aged kids, more than half a child's waking hours are spent outside of formal school environments (National Science Teacher Association; *Learning Science in Informal Environments*, 2012). Informal education like that provided by MDM – both in our building and through our outreach programming – are vital for both kids' education and to continue science learning beyond school.

Like virtually every other nonprofit in Maine, MDM receives no federal, state, or local government support outside of what we earn via competitive grants. While we have been fortunate to find support to provide these programs at no charge, it does require us to hope that we can provide these programs every year – as long as we can find funding – as opposed to actually knowing we can. While we've been successful thus far, and are grateful to all of our sponsors who have helped, it is difficult to continue to grow and expand these programs when so much time and effort has to be spent raising funds year over year. Support provided by the state of Maine for two programs that are important to fostering science learning for all ages, would provide us with foundational funding to ensure that we can continue to provide these public science education programs at no charge to Mainers.

I'd be delighted to answer any questions you may have.

Other MDM STEM programming:

- GSK Science in the Summer, offered in partnership with the Franklin Institute, this program aims to increase children's value of and confidence in doing science and pursuing STEM careers, especially for children from underrepresented backgrounds in STEM fields. As one of 50 program programs leads nationwide, we reach more than 800 2nd-8th grade students from diverse communities each summer. In 2021 the FI told MDM that our program is the most successful in the network, consistently exceeding our enrollment goals while delivering hands-on STEM enrichment Maine-wide.
- Mission2Mars. Another partnership with the Franklin Institute, we are one of five partners in this cohort of a nationwide program. Mission2Mars catalyzes community partnership between museums, amateur astronomers, and community based organization to deliver astronomy and space exploration activities to youth and family, with the primary subject content covering NASA's upcoming Artemis missions, returning humans to the moon by 2028.
- Learning Ecosystems Northeast (LENE). MDM is one of eleven science center partners working with the Gulf of Maine Research Institute through a NASA grant who are developing ways to engage science center visitors in data-rich investigations of changing ecosystems using locally relevant examples.
- Connected Learning Ecosystems (CLE) focused on building partnerships and pathways that provide youth with opportunities to engage in locally relevant climate connected learning experiences. MDM is creating a Bangor region CLE as part of our work in the LENE project. With this program expansion, MDM is working in three different areas of this NASA / GMRI project: working on our own exhibits/projects; anchoring a CLE in the Bangor area; and being a state-wide resource for all the CLEs around the state.
- Science Around ME (<https://www.sciencearoundme.org/>) helps users find science, technology, engineering, and math (STEM) events, projects, and programs happening/available in Maine, both in person and online.
- Maine Science Podcast (<https://www.mainesciencefestival.org/podcast>). Each episode is a conversation with a Mainer working in science, engineering, technology, and innovation. MSP invites listeners to discover a wide range of science happening in Maine and how scientists' life and career paths lead them to their field.
- Discovery Kits. Born out of the pandemic, these kits were designed as a "families doing science together" model. Kits were shipped as far away as Colorado, and we also provided hundreds of Kits to underserved neighborhoods, rural libraries, food pantries, and a local network that provides support for families affected by cancer. The Bangor School District ordered 600 kits to be delivered to summer STEM programs at six of the most underserved schools in the district.
- Science Teacher Academy (<https://www.scienceteacheracademy.org/>). The STA is being developed to address the gap in professional development opportunities available for elementary school teachers to more effectively and confidently teach science. The STA will partner with teachers, administrators, schools of education, museums, and other informal science organizations to greatly expand the science taught in Maine schools and better prepare those teachers in science teaching. James H. Page, Chancellor Emeritus of The University of Maine System, has noted:

This Academy is one of the most exciting, groundbreaking educational initiatives I have encountered in years. It represents an unprecedented opportunity for Maine educators at all levels to share and be trained in the best and most timely innovations on an ongoing basis. That the Academy would be run by the Museum means that it can take best advantage of the Museum's established network and, as an autonomous nexus, the Academy can work independently of any particular educational institution's approach or budget. The Museum is the right institution to lead this effort.