

Vermont Department of Libraries
VELI-STEM Project
National Leadership Grant for
Libraries

The Vermont Department of Libraries (VTLIB), in partnership with the Vermont Center for the Book and the Montshire Museum of Science has received a \$339,861 grant from the Institute of Museum and Library Services to launch Vermont Early Literacy Initiative - STEM (VELI-STEM), a 3-year project in 25 Vermont public libraries.

U.S. policymakers and education experts have made clear the urgent need for STEM (Science, Technology, Engineering and Mathematics) learning opportunities for citizens of all ages nationwide. Research shows that learning in informal environments such as public libraries can positively influence children's science learning in school, the pursuit of STEM occupations and an interest in lifelong science learning. The challenge is that librarians in small, rural libraries have limited ability to offer meaningful, ongoing and informal STEM learning experiences.

This project will equip public librarians from 25 Vermont libraries with the concepts and practices essential to STEM learning appropriate for children ages 3-7, along with the tools to deliver intentional, open-ended, ongoing and standards-based STEM learning experiences and programming and will give librarians approaches that will build on their own expertise while incorporating new content and skills. VELI-STEM will provide librarians with the resources and training needed to recognize and use opportunities to weave STEM language and ideas throughout their programming for young children, parents and community childcare providers.

The first key outcome is that librarians from rural communities will have been trained to recognize opportunities to incorporate STEM learning experiences for children and families throughout their library practice, including “story hours,” after-school programming, collection development, displays and “Discovery Science Centers,” newsletters and bibliographies. The second outcome is that librarians will have received advanced STEM training, learning tools (such as picture books), hands-on learning methods and materials and other STEM resources. Third, librarians will have access to and will inform an online STEM Clearinghouse of Resources developed throughout and after the project. Fourth, librarians will have transferred their newly acquired STEM knowledge and skills to community childcare providers through outreach and training programs so that providers will, in turn, introduce STEM learning experiences to the preschool children in their care.

Project evaluation and measurement will include: all 25 participating librarians, a sub-set of participating children and families, community childcare providers and key community stakeholders. The Project Evaluator will collect and analyze both quantitative and qualitative data at every level of the project, in order to measure and assess the ongoing operation (progress indicators) and overall effectiveness (outcomes) of the project.

The replicability of VELI-STEM is essential to project success and sustainability. Project personnel will select hands-on project materials with an eye to accessibility and cost. The STEM Clearinghouse of Resources and YouTube channel will remain active throughout the three years of the project, and VTLIB will work with COSLA (Chief Officers of State Library Agencies) to promote the program to other states, so that librarians everywhere—particularly in rural libraries across the country—will have access to training materials and will be able to use the resources and curriculum in perpetuity.

VELI-STEM addresses the IMLS goal: “To place learners at the center and support engaging experiences in libraries that prepare people to be full participants in their local communities and our global society.” In addition, VELI-STEM will help libraries ensure their place in the greater community as informal STEM learning environments for young children and their families.