



Position Title: STEM Education Specialist - Place-Based Education Research

FTE: 1 FTE

Salary Range: \$60,000 - \$70,000 dependent on experience

Start Date: October 1 - November 1, 2024

Location: Augusta, Maine (with hybrid or remote options)

Maine Math & Science Alliance (MMSA) is a 501(c)3 nonprofit organization that finds inspiring new ways to get people excited about science, technology, engineering and mathematics today, so that our youth can become the innovators and workforce of tomorrow. MMSA supports educators by:

- Developing professional development experiences for and with K-12 educators
 - Conducting research and evaluation of STEM learning experiences
 - Building relationships and networks to sustain systemic statewide improvement •
- Providing high-quality professional development and programming that can influence the future of our state

MMSA nurtures a work culture that is very team-oriented, welcomes a mix of diverse staff with diverse backgrounds and includes some of the best talent in STEM education. We offer ample opportunities for professional development for continuous growth and skill enhancement.

Maine Mathematics and Science Alliance is seeking a STEM Education Specialist - Place-Based Education Research, to be based in their Augusta, ME office with a hybrid or remote schedule option. The STEM Education Specialist plays a pivotal role in supporting MMSA's science education research initiatives. This position involves conducting research, leading professional learning activities, and overseeing project management for a place-based elementary science research project funded by the National Science Foundation (NSF). The STEM Education Specialist will collaborate closely with project leadership, research associates, external evaluators, and community members to design and implement research and disseminate findings across various platforms. The ideal candidate possesses a strong foundation in STEM education, research methodologies, and project management skills. This position requires in-person attendance at monthly organization-wide meetings at the MMSA offices in Augusta, Maine. Occasional travel within Maine and nationally, including occasional overnight stays, will be required for project-related activities and conferences, with travel expenses covered by MMSA.

The STEM Education Specialist's primary responsibility will be supporting a research effort to enhance science education in rural elementary schools through locally and culturally relevant curricula adaptations. This project supports educators and administrators in adapting science lessons to reflect the communities and cultures of their students. Over a four-year professional

learning experience, the project will investigate how such adaptations can lead to meaningful shifts in teaching practices and foster greater relevance of science education for students in rural areas.

Responsibilities of the STEM Education Specialist - Place-Based Education Research:
Research

- Design and conduct rigorous research in science education, employing robust research methodologies and qualitative data analysis techniques to assess educational interventions and outcomes
- Collaborate with the research team to develop research protocols, collect, organize, and analyze data to support design-based research
- Utilize qualitative data analysis software (e.g., NVivo, Dedoose) to analyze research findings, contributing to evidence-based decision-making in educational practices
- Contribute to academic publications, including peer-reviewed journal articles, conference presentations, and reports, to disseminate research findings and best practices in science education

Project Management

- Serve as a project manager from inception to completion, adhering to project timeline and developing systems to support collaboration across partner organizations
- Manage project budget, support labor planning, and review monthly financial reports to ensure accuracy of expenses and revenue
- Oversee task delegation and communication with stakeholders to ensure project success
- Build and maintain positive working relationships with project partners, schools, districts, and community organizations
- Exercise discretion and judgment regarding project deliverables and progress, maintaining high standards and adapting as project needs evolve
- Prepare quarterly reports and contribute to annual reports
- Develop and manage contracts with freelance professionals and consultants

Professional Learning

- Design and implement professional learning experiences, curriculum adaptations, and place-based education initiatives, utilizing knowledge of science education research literature and best practices
- Apply deep familiarity with the National Research Council's *Framework for K-12 Science Education* and the *Next Generation Science Standards* to lead professional learning with elementary teachers and support curriculum adaptation
- Collaborate with interdisciplinary teams, educators, and stakeholders to advance STEM education initiatives, integrating culturally relevant phenomena and place-based approaches into elementary science curricula

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Requirements of the STEM Education Specialist - Place-Based Education Research: ●

Ph.D. or Ed.D. required in Science Education, Curriculum and Instruction, or a closely related field.

- Demonstrated experience in developing or teaching K-12 science instructional materials, focusing on elementary education and a preference for expertise utilizing storylines or model-based inquiry approaches.
 - Experience with research design and analysis in science education, including coursework or practical experience in statistics, educational assessment, and/or research methodology, with a preference for qualitative research expertise.
- Proficiency in qualitative data analysis software (e.g., NVivo, Dedoose). ● Strong written and oral communication skills, with the ability to tailor communication for academic and non-academic audiences, including contributions to peer-reviewed publications, presentations, and reports.
- Strong interpersonal skills and the ability to work effectively in collaborative, interdisciplinary, and remote environments.
- Proficiency in Microsoft Office Suite, Mac OS, and standard office technology. ● Strong organizational skills, including managing multiple deadlines and deliverables simultaneously.
 - Experience or strong interest in place-based education and culturally relevant pedagogy.

Benefits of the Job:

- Attractive health plan with low to no contributions
- Employer-paid family dental, family vision, Life, STD, LTD
- Up to 10% 401K match
- 14 paid holidays
- Paid time off for birthday and floating holiday for religious purposes
- 20 paid vacation days
- 15 paid sick days

Please send a letter of interest that outlines your experience against each of the selection criteria above and resume by email to hr@mmsa.org or by regular mail to Human Resource Director, PO box 2246, Augusta, ME 04338

Materials should be submitted by **September 22nd** to ensure full consideration.

Maine Mathematics and Science Alliance is an equal opportunity employer that is committed to diversity and inclusion in the workplace. We prohibit discrimination and harassment of any kind based on race, color, sex, religion, sexual orientation, national origin, disability, genetic information, pregnancy, or any other protected characteristic as outlined by federal, state, or local laws. This policy applies to all employment practices within our organization. MMSA makes hiring decisions based solely on qualifications, merit, and business needs at the time.