



Welcome to the MISF STEM Grant Program!

We are so pleased to offer this grant opportunity to our member schools in partnership with our funders—3M Foundation, Schott Foundation and Xcel Energy Foundation.

The STEM Grant Program supports the development of integrated STEM learning opportunities that:

1. Improve students' knowledge of science, technology, engineering and mathematics concepts—especially in multidisciplinary contexts;
2. Develop students' STEM skills, such as the practices used by scientists and engineers (including collaboration, creative and critical thinking, problem solving, learning from failure, etc.) as well as their abilities to use materials, tools, and technology;
3. Enhance students' understanding of the interdisciplinary nature of STEM, the value of STEM skills and knowledge in the workplace, and relevance of STEM to everyday life and work; and
4. Increase students' interest in post-secondary STEM education and careers.

Descriptions of the STEM projects that have received STEM Grant funding in the past three years are posted on the MISF website [www.misf.org] under the STEM Program menu. They range from creatively simple, yet effective curriculum enhancements to large, complex projects. Both approaches have provided new STEM learning opportunities for students. The key to a successful grant proposal is to clearly address the goals of the STEM Grant Program in a way that is appropriate to your school and for the students it will reach.

MISF looks forward to receiving your STEM Grant Application. Our hope is to provide the funding needed to enhance quality STEM education programs in your schools.

If you have any questions about the grant program or the application process, please don't hesitate to contact us. The STEM Advisory Committee and MISF staff are here to help!

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MISF STEM Grant Guidelines: Winter/Spring 2019 For projects to be implemented in Summer 2019 and School-Year 2019-20

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MISF STEM Grant Guidelines: Spring 2019

For projects to be implemented in Summer 2019 and/or School Year 2019-20

Please read these guidelines carefully as some things have changed from previous years.

STEM Grant Types

Three types of STEM Grants will be awarded, as described below. Please note that the size and number of awards will be based on total funding available, total number of grant proposals received, and the degree to which submitted proposals address funding criteria. Members of the MISF STEM Advisory Committee will review the STEM Grant applications with respect to the criteria for each grant type stated below. Scoring rubrics for each grant type are available on the MISF website.

Eligibility and Number of Awards per School

All MISF member schools are eligible to apply for STEM grants, and the proposed project may be for any grade(s), K-12.

Schools may submit multiple grant applications, however a school is only eligible to receive one Starter OR one Innovation Grant, and one Sustainability Grant, per year. Remember, though, if your school has received any type of MISF STEM Grant in the past, you are not eligible to apply for a Starter Grant.

Schools that have received STEM Grants in prior years, including the previous year, are eligible to apply, with the following exception. Any school that receives a grant and subsequently fails to submit a final report by the deadline (unless an extension has been approved) is ineligible to apply for a STEM grant in the year that immediately follows.

NOTE: If your STEM Grant project includes building structures, interacting with protected animal or plant species, has safety implications for teachers and students, etc. you must show that you have a plan to comply with any applicable regulations and/or codes.

Post-Award Requirements

- At least one representative of the school is expected to accept their STEM Grant award at the Minnesota Private and Independent Education Awards on April 28, 2019.
- Paperwork received at the Education Awards must be submitted to officially accept the grant award and initiate payment.
- Starter and Sustainability Grants are paid in full upon receipt of paperwork.
- Innovation grants are paid in installments (2/3 upon receipt of initial paperwork and 1/3 upon receipt of interim report). The interim report documents project implementation plans developed over the summer and is due by August 31, 2019.
- Teachers listed on the STEM Grant application are expected to attend the 2019 MISF STEM Education Conference in August 2019 (date to be determined).
- All schools that receive STEM Grants are required to submit a final grant report to MISF by June 1, 2020. A Survey Monkey link for grant reporting will be provided at a later date.

Types of STEM Grants: Starter Grants

Starter Grants — up to \$1,500

Starter Grants are for schools that have not received a MISF STEM Grant in the past, and are suitable for projects that will jump-start STEM education in your school. Please note that schools are *NOT required* to begin with a Starter Grant—schools with well developed projects are encouraged to consider applying for Innovation Grants.

A Starter Grant will be awarded for acquisition and implementation of curricula and/or educational materials that align with academic standards in science, mathematics, engineering and technology, and use integrated, cross-disciplinary learning activities. Professional development and teacher stipends are allowed and encouraged expenses for Starter Grants. Starter Grant awards will be paid in full by June 2019.

Starter Grant Scoring Criteria [see scoring rubric for more detail]

15 points Describes what students will learn and do, addresses academic standards, and identifies skills and practices students will develop

20 points Describes needs of school, how project integrates with existing curriculum, real-world connections, and how teachers will plan and prepare

10 points Describes what will be assessed and how information will be used

45 points total

Types of STEM Grants: Starter Grants, continued

Starter Grant Application Questions

Note that all Letters of Interest and Grant Applications must be submitted via Survey Monkey. PDF copies of the Survey Monkey forms can be found on the MISF website for your reference. MISF strongly recommends that you prepare your Letter of Interest and Grant Application using word processing software and then copy and paste your answers into Survey Monkey when you are ready to submit.

PROJECT DESCRIPTION: Please provide an overview of your proposed project that describes what your school hopes to accomplish with an MISF Starter Grant. Your project description should answer the following questions: What need does the proposed project address or what opportunity will it provide? How will it provide benefit for STEM education at your school? [If funded, your project description will be published on the MISF website.] [\[200 words maximum\]](#)

ACADEMIC STANDARDS & INSTRUCTIONAL PRACTICES [\[200 words maximum\]](#)

1. What academic standards are relevant to the proposed project?
2. What will students learn and be able to do? [Please list up to three student outcomes.]
3. What important STEM skills and practices will students develop? [Please give specific examples.]

PLANNING & IMPLEMENTATION [\[400 words maximum\]](#)

4. What STEM curriculum and/or educational materials do you plan to acquire? How will these curricula and/or materials help meet the need or opportunity identified above?
5. How will this new curricula and/or materials integrate with your existing curriculum or STEM education efforts?
6. How does this project help students—in ways appropriate to their age and grade—understand what scientists and engineers do, see STEM as relevant to their lives, explore future career opportunities, and/or make connections to life outside the classroom?
7. How will teachers plan and prepare to implement this project? Please describe any planning or professional development that will be part of this project. How will participating teacher(s) share the progress and results of this project with others?

ASSESSMENT & IMPROVEMENT [\[200 words maximum\]](#)

8. How do you plan to assess the learning outcome(s) for students articulated above?
9. How will formative assessment be used by teachers to inform their teaching and to make improvements to the student learning experience?

Types of STEM Grants: Sustainability Grants

Sustainability Grants — up to 20% of original grant, not to exceed \$1,500

Schools may request one Sustainability Grant to provide additional funding for consumable materials needed to continue a STEM project that has previously received funding through the MISF STEM Grant Program. A Sustainability Grant may be requested for up to 20% of the school's original grant. Awarded grants will be paid in full by June 2019.

Sustainability Grant Scoring Criteria [see scoring rubric for more detail]

10 points	Describes successful implementation of the original grant project and provides supporting evidence of success
10 points	Describes changes that have been made following the original project and how the project integrates with and supports the school's existing STEM curriculum
10 points	Describes why project is important and how it will be sustained beyond this grant

30 points total

Sustainability Grant Application Questions

Note that all Letters of Interest and Grant Applications must be submitted via Survey Monkey. PDF copies of the Survey Monkey forms can be found on the MISF website for your reference. MISF strongly recommends that you prepare your Letter of Interest and Grant Application using word processing software and then copy and paste your answers into Survey Monkey when you are ready to submit.

PROJECT DESCRIPTION: Please provide an overview of your project for which you are seeking a Sustainability Grant. Briefly address what has already been accomplished and how this grant will help to sustain your project. [If funded, your project description will be published on the MISF website.] [\[200 words maximum\]](#)

PAST PROJECT SUCCESSES [\[200 words maximum\]](#)

1. Describe the successes of your prior STEM Grant project, especially in terms of the impact it has had on teaching and learning.
2. What evidence do you have to support these successes?

PLANS FOR IMPLEMENTATION, INTEGRATION & IMPROVEMENT [\[200 words maximum\]](#)

3. Describe how your project you hope to sustain has become integrated into your school's curriculum. How does it support and enhance your school's approach to STEM learning?
4. Describe what you learned while implementing your previously funded project and changes/improvements that you will make as a result.

SUSTAINABILITY [\[100 words maximum\]](#)

5. How will your school ensure that this project will continue to be an important part of your STEM curriculum beyond this Sustainability Grant?

Types of STEM Grants: Innovation Grants

Innovation Grants — up to \$7,500

1. Innovation Grants will be awarded for projects that:
 - Align with relevant **academic standards** in science, mathematics, engineering and technology; science and engineering practices; and/or **STEM skills** such as creativity, communication, teamwork, problem solving, and learning from failure.
 - Incorporate **formative and summative assessment** to guide real-time project implementation, measure project success, and identify opportunities for improvement.
 - Recognize the importance of **teacher professional development** by including training, mentoring, and/or summer stipends for planning and development.
 - Make **authentic and relevant connections** between STEM learning in school and the world beyond in ways that emphasize the value of STEM skills in life and work, the integrated and interdisciplinary nature of STEM, and STEM career exploration.
 - Build **meaningful community partnerships** between schools and community organizations, such as nonprofits, higher education, other K-12 schools, and/or businesses.
 - Lay a **foundation for creation, growth, expansion and sustainability** of STEM programs at the recipient schools.
2. Innovation Grant applications must be a **joint effort of two or more teachers**, either from the same school or from two or more schools. If the project team includes more than one school, collaborating schools may apply jointly for a single Innovation Grant, or submit separate linked grants. **If you are proposing a multi-school collaborative project, it is important that you contact the STEM Program Manager in advance of the application deadline to discuss your project.**
3. Innovation Grant applications must include a **Letter of Support** from at least one community partner that will participate in the project in a meaningful way.

Innovation Grant Scoring Criteria [see scoring rubric for more detail]

5 points	Need & opportunity
20 points	Aligns with relevant academic standards & practices
20 points	Student outcomes & assessment
15 points	Connections outside the classroom
15 points	Planning & implementation
5 points	Project sustainability

80 points total

Types of STEM Grants: Innovation Grants, continued

Innovation Grant Application Questions

Note that all Letters of Interest and Grant Applications must be submitted via Survey Monkey. PDF copies of the Survey Monkey forms can be found on the MISF website for your reference. MISF strongly recommends that you prepare your Letter of Interest and Grant Application using word processing software and then copy and paste your answers into Survey Monkey when you are ready to submit.

PROJECT DESCRIPTION: Please provide an overview of your project for which you are seeking an Innovation Grant. What do you hope to accomplish? What need does it address or opportunity will it provide for your school? How will it make a difference for STEM education at your school? [If funded, your project description will be published on the MISF website.] [200 words maximum]

ACADEMIC STANDARDS & INSTRUCTIONAL PRACTICES [300 words maximum]

1. What academic standards are relevant to the proposed project?
2. What STEM skills and practices will it help students to develop? Please give specific examples.
3. How will your project integrate multiple disciplines?
4. What technology will your project utilize, and how is it appropriate to the project?

OUTCOMES & ASSESSMENT [300 words maximum]

5. What will students learn as a result of this project? [Please list 1-2 student outcomes.]
6. What will students be able to do as a result of this project? [Please list 1-2 student outcomes.]
7. How do you plan to assess the learning outcome(s) for students articulated above?
8. How will formative assessment be used by teachers to inform their teaching practice and to make improvements to the learning experience?

CONNECTIONS OUTSIDE THE CLASSROOM [300 words maximum]

9. How does this project help students connect STEM to the real world, for example topics that are of interest and relevance in terms of personal, community and/or global perspectives?
10. How does this project help students—in ways appropriate to their age and grade—understand what scientists and engineers do and/or explore career and post-secondary educational opportunities? [Note: it is expected that high school projects will address STEM careers and post-secondary education in some way.]
11. List your community partner(s) who have provided letter(s) support and describe how they will help students to connect with people and organizations outside of the classroom.

PLANNING & IMPLEMENTATION [300 words maximum]

12. Describe how you plan to use grant funds, including curriculum/materials/equipment you plan to purchase and how the grant would support teacher planning and professional development.
13. Provide a work plan that shows how you will create and implement the project, including a timeline for planning, implementation, assessment and evaluation.
14. Identify new knowledge and skills needed by teachers and delineates plans to acquire them.

SUSTAINABILITY [100 words maximum]

15. How will this grant help your school build capacity and sustain this project for years to come? How will you identify accomplishments and challenges associated with this project to help ensure future success?

Use of Funds: How STEM Grant Funds May [and May Not] Be Used

All Grant funds must be used during the summer of 2019 and/or the 2019-2020 school year. All grant funds must be spent by June 1, 2020. Any funds not spent by this date must be returned to MISF by June 30, 2020.

Funds May Be Used for:

- EQUIPMENT, MATERIALS & SUPPLIES.
 - **Non-consumable materials** such as tools, lab equipment or similar items that are not for one-time use. Any equipment that is of significant cost must be clearly justified as being essential to the proposed project.
 - **Consumable supplies** may be included in Starter and Innovation Grants, up to 20% of the total request. Sustainability Grants are usually awarded to cover costs of consumable or replacement materials necessary to continue and improve a previously funded project. In some cases, non-consumable materials may be justified (for example additional sets of tools or curriculum materials to scale up a previously funded project).
- PROFESSIONAL DEVELOPMENT for teachers to learn new methods, acquire new knowledge or skills, or further their understanding in ways that are directly relevant to the project is strongly encouraged. This includes summer stipend to plan and develop STEM projects as well as workshops, training and other learning opportunities. Stipend must be paid at the rate of \$25/hour and may not exceed \$750 per teacher. Professional development is allowed for Sustainability Grants only in cases that directly relate to the original project, as opposed to extending it beyond its original scope.

Funds will be considered for the following if they are integral to the proposed project:

- Computer software, probeware, lab equipment or maker space equipment.
- Substitute pay and registration fees to enable teachers to attend a conference, seminar or workshop for professional development directly related to the proposed project.

Grant funds may not be used for:

- General-purpose expenditures such as technology (computers, tablets, projectors, smart boards, etc.) and furniture (such as desks, shelving and storage systems).
- Field trip, camp or competition expenses for students, e.g. program or registration fees, tuition, room and board and/or transportation.
- Fees or stipends for guest speakers, chaperones, etc.
- Expenses typically part of a school budget, such as teacher salaries or building renovations.
- Transportation, lodging, meals, car rental and other travel expenses for teachers to attend conferences, workshops, seminars, etc.
- Fees for residencies or programs offered by museums or other organizations UNLESS they include a significant teacher professional development component.
- Registration fees for the MISF STEM Education Conference.

If you have any questions about allowed expenses, please contact the STEM Program Manager in advance of submitting your grant proposal.

How to Apply

Note that all Letters of Interest and Grant Applications must be submitted via Survey Monkey. PDF copies of the Survey Monkey forms can be found on the MISF website for your reference, and Grant Application questions for each type of grant are also included in the descriptions of each grant type, above. It is strongly recommended that you prepare your answers to the Letter of Interest and Grant Application questions in advance using word processing software and copy and paste your answers into Survey Monkey when you are ready to submit.

Letter of Interest — Due Tuesday, January 15, 2019 by 6pm

Each school that intends to submit a STEM Grant Application must submit a Letter of Interest describing the preliminary project concept and plan. The Letter of Interest must be completed online and is available at the following link:

<https://www.surveymonkey.com/r/STEM-grant-LOI-2019>

Grant Application — Due Tuesday, February 19, 2019 by 6pm

Each grant application must include a completed cover sheet and a project budget in addition to the questions listed above. Innovation Grant applications also require at least one Letter of Support from a community partner. The MISF STEM Grant application can be found here: <https://www.surveymonkey.com/r/STEM-grants-2019>

STEM Grant Guidelines, Application Forms and Scoring Rubrics

The following information is available at: <http://misf.org/stem-grants/>

- STEM Grant Calendar of Important Dates
- STEM Grant Letter of Interest PDF
- STEM Grant Letter of Interest link
- STEM Grant Application PDFs for Starter, Innovation and Sustainability grant applications
- STEM Grant Application link
- STEM Grant Budget Form
- STEM Grant Application Scoring Rubrics for Starter, Innovation and Sustainability grants
- List of Resources and Community Organizations
- Reference List of Academic Standards
- Project descriptions for previously awarded STEM Grants

All Letters of Interest and Grant Applications must be submitted through Survey Monkey at the links provided above.

<p>Please direct any questions to: Beth Murphy MISF STEM Program Manager bmurphy@misf.org 612-270-0194</p>
