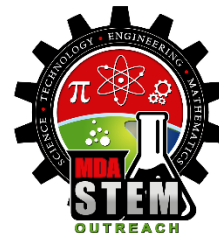




Request for Proposals

MDA STEM BEST Robotics Grant

Hub Teacher Professional Development 2023



AMENDMENT 2

I. FUNDING OPPORTUNITY DESCRIPTION

The Missile Defense Agency (MDA) Science, Technology, Engineering, and Mathematics (STEM) Outreach program's goal is to:

Increase STEM awareness and proficiency among K-12 and college students to enhance the number of U.S. scientists and engineers capable of solving future missile defense challenges in the government, industry, and academia.

MDA STEM's participation in this initiative aligns with the MDA efforts to develop and foster an engaged and diverse STEM talent pool. By making these proactive investments, MDA STEM strengthens and broadens the STEM competent talent pool across the education continuum to support future workforce needs. This grant initiative aligns with the following goals outlined in the [Department of Defense \(DoD\) STEM Strategic Plan](#):

Goal 1.0 – Inspire community engagement in DoD STEM education programs and activities to provide meaningful STEM learning opportunities for students and educators.

Obj. 1.2 – Enhance DoD STEM education program and activity experiences by leveraging the DoD's unique resources.

Goal 3.0 – Increase participation of underserved and underrepresented groups in STEM education and workforce development programs, activities, and outreach.

Obj. 3.2 – Expand the outreach of DoD STEM education and workforce development programs and activities to underserved and underrepresented communities through consideration of the barriers faced by these populations.

The MDA STEM Boosting Engineering, Science, and Technology (BEST) Robotics Grants provide a means for Official BEST Robotics Inc. Local Competition Hubs to obtain financial support for providing *direct teacher professional development to teachers within their first three (3) years of being a team teacher for a BEST Robotics team*. This teacher professional development increases the number of students able to complete and engage in this meaningful STEM learning opportunity and expand the accessibility of this program to underserved populations, specifically Title 1 schools, who would otherwise not have access to the resources necessary to fully engage.

What is BEST Robotics?

BEST Robotics, Inc. (www.bestinc.org) is a non-profit, volunteer-based organization whose mission is to inspire students to pursue careers in engineering, science, technology, and mathematics through participation in a sports-like, science-and-engineering-based robotics competition.

BEST's mission is to engage, inspire, and excite students to pursue STEM majors and STEM careers through the vehicle of an after-school robotics program and competition. BEST values access and diversity and encourages participation of all students and schools by providing a free program supported through the fundraising and mentoring efforts of a large higher education and industry volunteer corps.

BEST Robotics Inc. point of contact: Michael Steiner, Executive Director
Michael.Steiner@Bestinc.org, (412) 499-4790

II. DEFINITIONS

Official BEST Robotics Inc. Local Competition Hub: Competition hub recognized by BEST Robotics Inc. that feeds into an Official BEST Robotics Inc. Regional Competition Hub

Higher Education Agency (HEA): A post-secondary education institution, such as a junior college or university

Novice Team Teacher: Educator, employed full-time by the school system, within their first three (3) years of coaching a BEST Robotics Team

The BEST Robotics Team must be registered to compete at the Official BEST Robotics Inc. Local Competition Hub's 2023 competition.

Only one (1) Novice Team Teacher per school will be supported by this grant

Novice Team Teachers must be identified **by school** in the grant proposal

Teacher Professional Development (TPD): Hands-on training course provided by the Official BEST Robotics Inc. Local Competition Hub to train Team Teachers who plan to support a competing BEST Robotics team

Training Materials: Items *necessary* for the training of one (1) identified Novice Team Teacher at the proposed TPD

Teacher Supplemental Subsistence: Travel costs, as set by the U.S. General Services Administration (GSA), to cover mileage, meals, incidentals, and (if applicable) lodging of the identified Novice Team Teachers who are employed at a *school that is eligible to use Title I funding for schoolwide programs* for a maximum of two (2) days and 120 miles

Please reference the GSA Travel website for more information on travel costs:
<https://www.gsa.gov/travel-resources?topnav>

Meals and/or refreshments offered during the professional development session(s) will not be provided or reimbursed by or through this grant.

Title I Schoolwide Program Eligibility: As defined by the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the Every Student Succeeds Act (ESSA)

Some items in this grant are available specifically to support BEST Robotics teams who are associated with schools that are eligible to use Title I funding for schoolwide programs. Henceforth referred to in this document as a "Title I School". Please review the site below for more information on Title I Schoolwide Program eligibility:
<https://www2.ed.gov/policy/elsec/leg/essa/index.html>

Underserved and Underrepresented Populations: Traditionally or historically underserved and underrepresented populations in STEM, as defined by the DoD STEM Strategic Plan

Please reference the DoD STEM Strategic Plan for more information: https://dodstem-assets.dodstem.us/files/DoD_STEM_Strategic_Plan_2021.pdf

III. ELIGIBILITY INFORMATION

Only proposals submitted by an Official BEST Robotics Inc. Local Competition Hub will be considered.

To be eligible for this grant, all applicants must meet the following five (5) criteria:

1. The applicant must be registered with BEST Robotics Inc. as an Official BEST Robotics Inc. Local Competition Hub
2. The applying Official BEST Robotics Inc. Local Competition Hub must be **EITHER**:
 - Managed by a Higher Education Agency (HEA), such as a junior college or university
 - OR**
 - A 501(c)3 non-profit organization working closely with an HEA
 - All receipts and payment portions of the grant must be processed through the HEA's grant office
3. The HEA associated with the applying Official BEST Robotics Inc. Local Competition Hub submitting a proposal must have:
 - Current information in the System for Award Management (SAM).
 - If awarded a grant, SAM information must remain current until final payment is received, unless exempt from the requirement under 2 CFR 25.110. Additional information about registration procedures may be obtained by telephone (866-606-8220) or web site (<https://www.sam.gov>). For more detailed instructions for registering with SAM, refer to: <https://www.grants.gov/web/grants/applicants/organization-registration/step-2-register-with-sam.html>

AND

- A Grants.gov account with current information:
 - For more detailed instructions for registering with Grants.gov, refer to: <https://www.grants.gov/web/grants/register.html>

AND

- A Procurement Integrated Enterprise Environment (PIEE) (<https://wawf.eb.mil/piee-landing/>), formerly Wide Area WorkFlow (WAWF), e-Business Suite account for, at a minimum, Invoice, Receipt, Acceptance, and Property Transfer (iRAPT) usage.
 - PIEE accounts must remain current until all grant agreement payments and reporting are complete. College/University signing authority for the grant agreement, if awarded, must have working knowledge and access to PIEE. Additional information about PIEE accounts and instructions may be obtained by telephone (866-618-5988) or website: <https://wawf.eb.mil/xhtml/unauth/help/help.xhtml>
 - When viewing the website, select "WAWF – Support Contractor Getting Started Help" under the "Government and Government Support Contractors Getting Started" box on the bottom left of the screen.

4. If the applying Official BEST Robotics Inc. Local Competition Hub was awarded an MDA STEM BEST Robotics Grant Teacher Professional Development during any previous competition year:
 - All reporting requirements, including deadlines and content requirements for the previous grant were met

AND

 - Projected team registration goals proposed in the Fiscal Year (FY) 2022 application were attained (if applicable)

AND

 - Current request for grant funds reasonably exceeds the previous proposal and new team recruitment target goals
5. Grant award recipients must be able to accomplish all required hub tasks (including conducting teacher professional development) **without any involvement or additional funding from MDA.**

IV. AWARD INFORMATION

The MDA will award no more than \$60,000 through this grant opportunity in FY 2023 to Official BEST Robotics Local Competition Hubs only. The number of awards is not predetermined. Each individual grant award will vary, but will not exceed \$5,000. Estimated cost per teacher attendee shall not exceed \$483.10.

Teacher Professional Development Course

The proposed Teacher Professional Development (TPD) course must meet the following eight (8) criteria:

1. Is directed by the Official BEST Robotics Local Competition Hub at the location of that Hub's 2023 competition
2. Is conducted within three (3) months of kickoff for the 2023 BEST Robotics competition season
3. Awards at least one (1) continuing education credit (CEU) for participating teachers
4. Provides instruction modules in at least three (3) STEM areas essential to the BEST Robotics competition (e.g. Engineering notebooks, programming languages, computer-aided design (CAD), automation, and robotics)
5. Provides training materials for each team teacher to retain, for classroom instruction
6. Provides sessions totaling at least four (4) hours of instruction
7. Records the attendance of the Novice Team Teachers supported by this grant
8. Administers "Missile Defense Agency BEST Robotics Teacher Professional Development Survey" to each supported teacher

Training Materials

Training Materials supported by this grant are to be used at the proposed TPD course to support up to 10 Novice Team Teachers. This should include materials the Novice Team Teachers will retain for classroom instruction. Funding will include **exact reimbursement for costs up to \$120 per identified Novice Team Teacher**.

The proposal should include the following three (3) items:

1. Itemized list of Training Materials proposed (name, quantity, and cost)
2. Description of how the Training Materials will be presented in the TPD course
3. Identified Novice Team Teachers (up to 10), listed by school

Funds requested for Training Materials must reflect the total number of identified Novice Team Teachers (up to 10).

Teacher Supplemental Subsistence

Teacher Supplemental Subsistence funds supported by this grant are to be distributed to identified Novice Team Teachers **employed at a Title I School** who attend the proposed TPD. Funding will include exact reimbursement for costs per individual up to and not exceeding the amounts identified in the table below:

Expense	Description
Lodging	\$98 per night of TPD course <i>Up to 2 nights</i>
Mileage	\$0.665 per mile <i>Up to 120 miles (\$78.60)</i>
Meals and Incidentals	\$44.25 per day of TPD course <i>Up to 2 days</i>

The proposal should include the following three (3) items:

1. The length of the proposed TPD course
2. Number of identified Novice Team Teachers (up to 10) **employed by a Title I School**
3. Method for recording attendance at the TPD

Funds requested for Teacher Supplemental Subsistence must reflect:

1. The length of the proposed TPD course
2. Number of identified Novice Team Teachers (up to 10) **employed by a Title I School**

V. PROPOSAL SUBMISSION

Find detailed information about the process for applying for a grant through Grants.gov at: <https://www.grants.gov/web/grants/applicants/apply-for-grants.html>

In addition to information requested in the Grants.gov standard form instructions, your proposal must include the following items as attachments.

Item Number	Required File Name	Required Contents
1	Training Information	• Description of proposed TPD, including: ○ Location of proposed TPD ○ Agenda of TPD, including dates ○ Estimated number of CEUs to be given to the attendees ○ Method for recording participant attendance • Description of each learning module included in the TPD detailing: ○ Time allotted for each module ○ Brief description of learning objectives/modules ○ Brief description of learners' assessments • Statement that the hub will be able to accomplish all required hub tasks (including conducting teacher professional development) without any involvement or additional funding from MDA. • Projected number of teams to be registered with the hub for the 2023 competition season • A table, "Table A", including the following information: ○ List of schools requested to be supported by this grant ○ Indication of the each school's Title I status ○ Supporting information indicating Title I status of participating schools, such as an official website URL ○ Total Number of Novice Team Teachers for which funding is requested ○ Number of Novice Team Teachers (up to 10) who are employed at a school eligible to use Title I funding for schoolwide programs • A table, "Table B", including the following information: ○ Itemized list of Training Materials proposed (name, quantity, vendor, and cost) ○ Description of how the Training Materials will be presented in the TPD course ○ Number of Novice Team Teachers (up to 10) for which funding is requested (this should align with the "Table A" described above) ○ Total amount of funding requested for training materials • A table, "Table C", including the following information: ○ Number of Novice Team Teachers (up to 10) who are employed at a school eligible to use Title I funding for schoolwide programs (this should align with the "Table A" described above) ○ Length (in days and nights) of the TPD ○ Total amount of funding requested for Teacher Supplemental Subsistence <i>Suggested table layouts are included in <u>Section IX</u> of this document.</i>

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Item Number	Required File Name	Required Contents
2	Hub Contacts	• Official BEST Robotics Inc. Local Competition Hub's name and address • Hub Director's name, e-mail address, and phone number • Grant Coordinator's name, e-mail address, and phone number • List of potential schools which might send a teacher to attend the proposed TPD and a contact phone number for each
3	Support Letter	A signed support letter on official letterhead (internal) from physical site's senior leadership, such as a University President or Vice-President or School Administrator.
4	Post-Award Agreement	A signed letter, on official letterhead, of acknowledgement and agreement from the Hub Director to provide MDA with required post-award reporting as defined in <u>Section VII</u> of this document.
5	SAM Certification	Certification that SAM information for the associated HEA is current
6	WAWF Certification	Certification that a WAWF account for the associated HEA is current

Items 1 – 6 should be submitted on Grants.gov on the Attachments Form. **Please use the attachment names and order listed in the table above.**

The SF424 (R&R) required by Grants.gov will remain and be submitted separate from items 1 – 6. Also included is the RESEARCH & RELATED Personal Data form; this is an optional form to be completed by the grant coordinator.

Additional Resources for the Grant Submission Process

Grants.gov applicants can apply online using Workspace. Workspace is a shared, online environment where members of a grant team may simultaneously access and edit different webforms within an application. For each Funding Opportunity Announcement (FOA), you can create individual instances of a workspace.

<https://www.grants.gov/web/grants/applicants/workspace-overview.html>

Below is an overview of applying on Grants.gov. For access to complete instructions on how to apply for opportunities, refer to <https://www.grants.gov/web/grants/applicants/apply-for-grants.html>

For additional training resources, including video tutorials, refer to <https://www.grants.gov/web/grants/applicants/applicant-training.html>

Applicant Support: Grants.gov provides applicants 24/7 support via the toll-free number: 1-800-518-4726 and email at support@grants.gov. For questions related to the specific grant opportunity, contact the number listed in the application package of the grant for which you are applying.

VI. GRANT APPLICATION REVIEW INFORMATION

Proposals failing to demonstrate the eligibility requirements outlined in Section III - Eligibility Information, will not receive further consideration for this grant.

MDA will evaluate proposals based upon the following two (2) areas – efficiency and commitment, as defined in the table below:

Area	Description	Proposal Submission Data (Section V)	Evaluation Weight
Efficiency	Evident from the information provided by the Official BEST Robotics Local Competition Hub that the TPD: ○ Will effectively use the funds to train the proposed teachers ○ Will provide relevant and effective training to the proposed teachers ○ Will conduct the TPD in alignment with the guidelines in <u>Section IV</u> of this document ○ Will support Title I schools in the area (that are expected to register teams for the 2023 competition season) that would benefit from this grant award (i.e. would not otherwise have access to the necessary teacher training to be competitive in the 2023 competition season)	Item 1	60%
Commitment	Evident from the information provided that the Official BEST Robotics Local Competition Hub is: ○ Managed by or works closely with an HEA, who will process receipts and payment portions if grant is awarded ○ Supported internally for this TPD	Items 2 and 3	40%

A single grant award for any hub will not exceed \$5,000. Evaluations of proposals may result in funding levels lower than the proposed amount(s).

VII. AWARD ADMINISTRATION INFORMATION

Applications are due no later than August 18, 2023 at 5:00 p.m. Central Daylight Time (CDT) via Grants.gov.

Award Notices

Successful proposers will receive a separate notice (letter or e-mail) stating that their application has been selected. The notification letter or e-mail must not be regarded as an authorization to commit or expend funds. The Government is not obligated to providing any funding for this award until a Government Grants Officer and the appropriate official from the selected entity sign the grant document.

An award notification letter should be sent to all applicants by August 31, 2023.

Events taking place before the grant document is executed are not reimbursable by this grant.

Reporting Requirements

All reporting requirements should be e-mailed and postmarked, as applicable, no later than October 2, 2023.

To receive the funding, all awardees must submit the following four (4) items to **STEM@mda.mil**:

1. Map of Official BEST Robotics Local Competition Hub's service region identifying (using a map pinpoint dot) all identified Novice Team Teachers' schools, with school name and city
2. Completed "Missile Defense Agency BEST Robotics Teacher Professional Development Survey" from each of the identified Novice Team Teacher

The lack of completion and/or submission of these surveys can results in funding levels lower than the proposed amount(s).

3. Receipts for Novice Team Teacher lodging expenses (if applicable)
4. 10-20 pictures (saved as **.JPG** files), documenting all learning modules included in the TPD course.

Post-award electronic submissions should be sent to MDA STEM, **STEM@mda.mil** with the e-mail subject "**MDA STEM BEST Robotics Grant Kits 2023 – [Hub Name] and [Grant Number]**".

Post-award acceptance letters should be sent to all applicants and necessary parties by **October 31, 2023**.

Invoicing

The MDA BEST Robotics grant is limited to limited to teacher professional development offered by an Official BEST Robotics Local Competition Hub.

Invoice documentation submitted in WAWF must meet the following two (2) criteria:

1. Provide receipts, expense documents, and/or invoices to support items reimbursable (fully or partially) through the grant fixed supplementary stipend

AND

2. Invoices must be separated by category – **Training Materials** and **Teacher Supplemental Subsistence (lodging and meals) costs**

Request for payment must be submitted in WAWF and meet the following four (4) criteria:

1. Is documented by the invoice(s)
2. **Does not exceed** the amount identified in the grant agreement
3. Request must be submitted between **November 1, 2023** and **December 1, 2023**
 - Occurs after deliverables, outlined in Section VII: Award Administration Information, Subsection: Reporting Requirements, are received by MDA STEM; and
 - Occurs after hub receives an approval e-mail for deliverables from MDA STEM.
4. Completed **SF 270** form with the hub's invoice(s) for reimbursable items (only) must be submitted as attachments to the cost voucher.

The Office of Naval Research (ONR) will serve as the administrative office (Grant Agreement, Block 6). ONR will approve the voucher and supporting documents. Visit the ONR website for more information on electronic payments for grants: <https://www.nre.navy.mil/>

After ONR approves the voucher and supporting documents, ONR will forward the information to the Defense Finance and Accounting Service (DFAS) for payment. DFAS is the payment office (Grant Agreement, Block 12).

Both ONR and DFAS are completely separate entities from MDA.

Awarded hubs must:

- Include MDA in all communications with ONR regarding payments;
- Include MDA in all communications with DFAS, if applicable;
- Forward to MDA e-mail confirmations regarding invoice submissions (whether rejected or approved) from ONR; and
- Provide to MDA a copy of all invoice documents and supporting receipts

VIII. AGENCY CONTACTS

Questions about the grant application process should be directed to: Luisa A. Martinez-Medina, Grants Officer, luisa.martinez-medina@mda.mil

Questions about the grant implementation or post-award documentation should be directed to MDA STEM, STEM@mda.mil.

IX. SUPPLEMENTAL INFORMATION

Suggested Table Layout: Table A

School Name	Title I schoolwide program eligible (Y/N)	Title I Status Supporting Information
[School Name A]	No	N/A
[School Name B]	Yes	[Official URL]
[School Name C]	Yes	[Official URL]
Number of Novice Team Teachers	3	
Number of Title I Novice Team Teachers	2	

Suggested Table Layout: Table B

Training Material				Quantity per Individual	Cost per Individual
Name	Description	Vendor	Item Cost		
[Item A]	Description A	Vendor A	\$ 5.00	2	\$ 10.00
[Item B]	Description B	Vendor B	\$ 15.00	1	\$ 15.00
[Item C]	Description C	Vendor C	\$ 20.00	1	\$ 20.00
[Item D]	Description D	Vendor D	\$ 8.00	4	\$ 32.00
Individual Cost					\$ 77.00
Number of Novice Team Teachers					3
Total Cost					\$231.00

Suggested Table Layout: Table C

Expense	Funds	Length of TPD	Individual Cost
Lodging	\$98.00	1 night	\$ 98.00
Mileage (up to 120 miles)	\$78.60	N/A	\$ 78.60
Meals and Incidentals	\$44.25	2 days	\$ 88.50
Total			\$ 265.10
Number of Title I Novice Team Teachers			2
Total Cost			\$530.20