

## Request for Proposal DoD STEM Office Robotics Grants 2018 – 2019 Opportunity

The Department of Defense Science Technology Engineering and Math (DoD STEM) Strategic Plan FY 2016-2020 states the Mission as:

**Attract, inspire, and develop exceptional STEM talent across the education continuum to enrich our current and future DoD workforce to meet defense technological challenges.**

As delineated in the DoD STEM Strategic Plan:

Goal 2: INSPIRE youth and community engagement in STEM education and outreach in the K-12 domain by supporting and enhancing student and educator participation in DoD-sponsored STEM events.

Objective 2.2: Improve the quality of STEM resources (i.e., mentors, equipment and activities) and events by implementing research-based programs focused on knowledge, skills, and abilities associated with STEM education.

Objective 2.3: Encourage STEM educators by increasing and supporting volunteering of DoD scientists and engineers in schools, labs and STEM events.

DoD STEM robotics grants provide a means for the DoD workforce, scientists and engineers, to achieve sustained engagement with students, parents, teachers and the public in STEM initiatives, by allowing our current workforce to coach and mentor robotics teams across the Nation within proximity of our DoD facilities. Participation in this initiative aligns DoD efforts to develop and foster an engaged and diverse STEM talent pool by making proactive investments that strengthen and broaden its STEM competent talent pool across the education continuum to support future DoD workforce needs.

DoD STEM is soliciting proposals from all interested DoD sites and DoD Education Activity (DoDEA) schools for participating in the 2018– 2019 robotics season. DoD STEM will make funding available to sponsor team participation in *FIRST*® programs.

This program is managed by Lorien Proud who can be reached at [lorien.proud.ctr@mail.mil](mailto:lorien.proud.ctr@mail.mil). She will also provide an informal help desk, and serve as an interface between sites, DoD STEM and *FIRST*®.

### What is *FIRST*®?

*FIRST*® (For Inspiration and Recognition of Science and Technology) is a non-profit organization which organizes four robotics programs for students from six years old through high school, K-12. Teams are typically formed in schools, after school, organizations or clubs, and neighborhoods with coaching, mentoring and sponsorship from professionals at science and technology-based organizations. *FIRST*® provides a family of robotics programs to allow a continued pathway for

students to engage in STEM activities throughout their education. *FIRST*® programs supported by this grant are:

- *FIRST* LEGO League Jr (FLL Jr), 6-9 yrs
- *FIRST* LEGO League (FLL), 9-14 years, 9-16 years outside US/Canada
- *FIRST* Tech Challenge (FTC), middle & high school students
- *FIRST* Robotics Competition (FRC) high school students

For more information about *FIRST*® go to <http://www.firstinspires.org/>

## THE PROPOSAL PROCESS OVERVIEW

The proposal process overview, below, is meant to help all interested local sites submit proposals to the DoD STEM robotics. This Call for Proposals will be distributed to DoD Site Coordinators at DoD sites/bases and District Coordinators at DoDEA schools. Site/District Coordinators will distribute the call of proposal to potential DoD mentors. DoD mentors will contact their teams, collect all the information requested in the form and provide it to their local DoD Site/District Coordinators. DoD Site/District Coordinators will rank proposals from their site and follow their chain of command submission requirements to submit the proposals to DoD STEM robotics.

The DoD STEM Robotics Grants Call for Proposals will be open **from May 25 to June 29, 2018**. Site/District Coordinators must submit all the proposals from their site, following their chain of command specific directions, to [lorien.proud.ctr@mail.mil](mailto:lorien.proud.ctr@mail.mil) no later than **close of business on June 29, 2018**.

In the event that demand exceeds available funding, the selection process will be based on ranking provided by the Site/District Coordinators. Incomplete proposals will not be accepted. No corrections will be allowed after the Call for Proposal is closed. The DoD STEM robotics grant, if awarded, is not transferable.

By July 20, 2018, notification of award will be emailed to the team DoD mentor and main team contact with a copy to the chain of command. Teams need to make sure that their main team contact is available to complete team registration, purchase materials and answer questions during the summer timeframe. If unable to be reached June through August the team will forfeit DoD STEM funding.

## THE PROPOSAL SUBMISSION REQUIREMENTS

Site/District Coordinators must submit all proposals from their site (to their chain of command if directed) to [lorien.proud.ctr@mail.mil](mailto:lorien.proud.ctr@mail.mil) in the provided form.

The PDF form submission must contain all the requested information:

- DoD Site/District Coordinator contact information
- DoD site information, branch of service, location

- DoD mentor contact information, must provide .mil email address or .dodea.edu for DoDEA schools (see “What is involved in mentoring a Team?” section for DoD mentor responsibilities)
- Main team contact name and email address (as shown in the *FIRST* TIMS database)  
**IMPORTANT.** Main team contact can be a DoD mentor, coach, teacher, volunteer or parent. For veteran teams, Main contact must have access to team’s account in *FIRST* database (TIMS) prior to proposal submission. For rookie teams, after award notification, Main contact will have to create the new team’s account profile in *FIRST* database (TIMS). It is the responsibility of the Main contact to complete registration (via TIMS) and purchasing of grant items using the specific grant instructions **prior to deadlines** or grant will be forfeited. **NOTE: Keep in mind, to complete registration, two team coaches must have been fully approved in TIMS and pass Youth Protection Policy (YPP) screening, which can take several days to complete.** TIMS for each program can be found by searching: FLL Jr TIMS, FLL TIMS, FTC TIMS, or FRC TIMS.  
  
All grant correspondence will be sent to the DoD mentor and Main contact listed in the PDF form. Upon request from DoD STEM grant coordinators, mentors and Main contacts may be required to validate team information. It is important that their contact information is correct.
- School/organization contact information (name, address, state, zip code)
- Program the team will participate in. Please refer to “What is *FIRST*®?” section of this call and to *FIRST*® website (<http://www.firstinspires.org/>) to determine what program fits your team best. In general, FLL Jr is 6-9 year olds, FLL is 9-14 year olds, FTC is middle/high school, FRC is high school.
- Is team VETERAN or ROOKIE? (Has the team participated in *FIRST* before?)
- Team number
  - o VETERAN teams are **REQUIRED** to submit their existing team number at the time of application. It can be found in team’s account in *FIRST* database (TIMS). Veteran teams with incorrect or missing team numbers will not be considered for grants.
  - o ROOKIE teams will submit their team numbers after award notification and once the team registration (via TIMS) for 2018-2019 season is open. Rookie teams will be required to provide their temporary team number (when available) in order to receive grant awards.
- Teams are required to submit information about military impacted schools and Title 1 schools. If you do not submit this information your grant will be held up for approval or even forfeited.

## LOCAL DOD SITE/DISTRICT COORDINATOR RESPONSIBILITY

- Ensure that the Call for Proposal is disseminated in a timely manner to available DoD workforce (not contractors) and DoDEA teachers
- Ensure that participation on a sponsored robotics team is open, without discrimination, to the maximum allowable number of students of the general student population.

- Collect and validate information from all interested DoD mentors, ensure that information is complete and rank before submission (See IMPORTANT section below)
- Pay particular attention to the proposed program, team number and rookie/veteran status.
- Complete the submission template with local proposals from their DoD site/district ranked (in priority order) with due consideration of the following:
  - o Does this team support local DoD site diversity goals? (Yes or No)
  - o Place teams supporting diversity and military children highest in their site priority list.
  - o Proximity to the DoD site and DoD volunteer workforce (in miles).
  - o A specific DoD mentor (.mil email required; .dodea.edu for DoDEA schools) has been identified by name to support this team
- Provide team reporting data to the Robotics Coordinators and/or *FIRST* during the season when requested
- Commit to providing support for their *FIRST*® teams and mentors throughout the season

### What is involved in mentoring a Team?

**DoD/DoDEA mentor responsibilities.** Grant sponsorship requires a DoD/DoDEA workforce volunteer be identified as a coach or mentor to submit a proposal for a new (“rookie”) or continuing team (“veteran”) grant. DoD/DoDEA volunteer coaches and/or mentors of a *FIRST*® team should send their team information to their local Site/District Coordinators. DoD/DoDEA volunteer coaches and/or mentors of a *FIRST*® team are responsible for:

- Submitting their team information (program, number and Main contact/coach information) to their local Site/District Coordinator
- Ensuring that the Main contact for the team (as listed in the *FIRST* TIMS database) is available to support the registration of the team within the timeframe designated for the DoD STEM robotics grant. (Search FLLJr TIMS, FLL TIMS, FTC TIMS, or FRC TIMS)
- Fielding a team of the appropriate size and age group as specified by *FIRST*®
- Identifying sufficient resources to successfully coach the team
- Taking the team through the entire FLL Jr/FLL/FTC/FRC season
- Entering the team into a *FIRST*® local, qualifying, district or regional competition
- Taking the team to higher levels of competition should they advance
- Acknowledging DoD STEM robotics grants, along with their local DoD site/school, as a team sponsor
- Coordinating with and reporting progress to Robotics Coordinators (when requested)
- Abiding by all *FIRST*® rules and guidelines (<http://www.firstinspires.org>)
- Engaging other colleagues and the families of team members to provide increased support
- Reaching out for help, when necessary, to be successful. *FIRST*® teams involve the team and the surrounding community. Robotics teams may need the support of local schools and/or community organizations (meeting location, materials) along with the DoD STEM grant. There is an expectation that the team will be able to raise supplemental funds from sources outside of DoD STEM for items not provided by the DoD STEM grant. Please see below for approximate funding.

**Time Commitment.** Each *FIRST* program’s competitive season has a well-defined, compressed schedule that requires sufficient lead-time to address the activities associated with each year’s

challenge. Coaches/mentors typically will meet with their teams regularly during the entire season in preparation for a competition or exposition; the frequency and duration of meetings is dependent upon the skill level and the progress made by a team during their meetings. Many coaches/mentors spend on the order of 60-80+ hours with their FLL Jr/FLL teams, and as much as 100 hours or more with FTC/FRC teams, in preparation for competitions. Additional time is required to prepare for and attend competitions; of course, the further your team advances, the more time will be required.

**Calendar.** *FIRST* LEGO League Jr (FLL Jr), a non-competitive program for 6-to-9 year olds, begins registration on May 11, 2018, issues the challenge in early August 2018, and holds expo events from November 2018 through April 2019.

*FIRST*® LEGO League (FLL) and *FIRST*® Tech Challenge (FTC) opens on May 11<sup>th</sup> 2018 and issue their respective challenge in September 2018. Competition may be held from October 2018 through March 2019.

*FIRST*® Robotics Competition (FRC), at the high school level, registration opens May 11, 2018, issues the challenge in early January 2019, and holds regional/district competitions March through early April 2019.

The season finale for all programs is the Championship, for FTC / FRC teams, and “World Festival,” for FLL and FLL Jr, in mid-to-late April 2019. A detailed season schedule for each program is available on-line at the *FIRST*® website.

**What does DoD STEM Sponsorship Cover?**

**Costs.** This DoD STEM robotics grant will cover various costs of fielding a team for participation in one of the four *FIRST* programs. Funding will not be sent directly to teams nor DoD sites/schools; rather, robotics coordinators establish funding at *FIRST*®, and *FIRST*® will issue coupon codes for specific items provided by the grant. The *FIRST* Grants office will send specific grant procedures to DoD STEM sponsored teams that must be strictly followed to use the DoD STEM grant. Grant awards will include specific items that teams can order which were approved for that season.

**Teams that register or place an order without the specific DoD STEM grant instructions will forfeit the grant.** Teams are responsible for payment of their purchases when not using the specific DoD STEM grant coupon and instructions. **NOTE: Refunds will not be permitted.**

For rookie *FIRST*® teams (new to FLL Jr, FLL, FTC, or FRC), any combination of the following may be provided (items will be specified in the grant award):

Program	Product	*Actual Costs	**DoD STEM Grant Coverage
Rookie FLL Jr	1 FLL Jr Team Registration and/or 1 team kit, and other fees as applicable	\$800	\$800
Rookie FLL	1 Team Registration and/or 1 Field Setup Kit and/or 1 Robot Kit, and other fees as applicable	\$2,000	\$2,000

Rookie FTC	1 Team Registration, Robot competition kit, android controller, and other fees as applicable	<b>\$4,000</b>	<b>\$3,000</b>
Rookie FRC	1 (full) Team Registration as outlined by <i>FIRST</i> ® on their website, which includes attendance at one competition, and/or Kit of Parts and competition registration fees	<b>\$20,000</b>	<b>\$11,000</b>

For veteran *FIRST*® teams (returning to FLL Jr, FLL, FTC, or FRC), any combination of the following may be provided (items will be specified in the grant award):

<b>Program</b>	<b>Product</b>	<b>*Actual Costs</b>	<b>**DoD STEM Grant Coverage</b>
Veteran FLL Jr	1 FLL Jr Team Registration and/or 1 team kit, competition registration fees	<b>\$800</b>	<b>\$800</b>
Veteran FLL	1 Team Registration and/or 1 Field Setup Kit and/or 1 Robot Kit, competition registration fees	<b>\$2,000</b>	<b>\$1,500</b>
Veteran FTC	1 Team Registration, Robot competition kit, android controller, competition registration fees	<b>\$4,000</b>	<b>\$2,000</b>
Veteran FRC	1 (full) Team Registration as outlined by <i>FIRST</i> ® on their website, which includes attendance at one competition, and/or Kit of Parts.	<b>\$20,000</b>	<b>\$7,000</b>

\*These are very conservative approximations of costs per team and do not include any travel costs which can be upwards of \$20,000 for a team of ten students.

\*\* These are approximations of funding levels available this season and include World's registration fees, if available. Final grant amounts will be sent when awarded.

**Please Note.** Grants ARE NOT reimbursable and NOT transferable. DoD STEM robotics grants will not be used for materials other than those identified by the specific grant award instructions. If the team receives registration specific grants from more than one organization, and the grants are in conflict, please notify us immediately. DoD STEM encourages teams to look outside of this grant for additional resources. Please see this link for a Fundraising Toolkit to help you along the way.

<https://www.firstinspires.org/resource-library/fundraising-toolkit>

**Support.** Coaches and mentors have a tremendous support system that is provided by *FIRST*®, to include forums, training sessions, coach's manual, computer-aided guides, and email contact. In addition, DoD STEM provides support through the Robotics Coordinators who have extensive experience in fielding *FIRST*® teams, and who have considerable expertise in both unmanned systems (real-world robotics) and mentoring youth. Robotics Coordinator support will take the form of email, phone, and web-based information sources. These resources, while limited, are intended to help make you successful in your coaching experience. Robotics Coordinator support may also include periodic contact to determine how your season is progressing. The DoD STEM Robotics Coordinators can be contacted at [lorien.proud.ctr@mail.mil](mailto:lorien.proud.ctr@mail.mil).

**IMPORTANT**

**For program or content questions:  
Lorien.proud.ctr@mail.mil**

Please do NOT forward this Call for Proposals outside of your local DoD workforce/DoDEA Schools. Proposals are NOT accepted from robotics teams themselves. Proposals must be submitted by the local DoD Site/District Coordinator or their designated point of contact in accordance with their chain of command guidance.

The DoD Site/District coordinator must collect information from all the teams at their local site that are requesting sponsorship and submit completed PDF forms. The file should be emailed to [lorien.proud.ctr@mail.mil](mailto:lorien.proud.ctr@mail.mil) with the subject line of "2018-2019 Proposal submission (YOUR SITE/DISTRICT NAME)" either by the Site/District coordinator or in accordance with their chain of command directions.

Multiple proposals for one school/organization for the same program will need special consideration. One grant per school/org per program is allowed with the exception of DoDEA Schools.

Teams who register without using the specific DoD STEM grant award code and instructions will forfeit the DoD STEM grant in its entirety. No variation in the process will be permitted. No refunds will be given.