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## **Request for Proposal Participation in NDEP-Sponsored Robotics Teams 2011-2012 Opportunity**

FIRST®, the high-profile and highly regarded national robotics organization, has been designated an NDEP K-12 partner in Fiscal Year 2011. DDRE funding will make it possible for DoD laboratories in the NDEP network to sponsor high school, middle school, and elementary school teams entering into one of the annual FIRST® Robotics Competition (FRC), FIRST® Tech Challenge (FTC), or FIRST® LEGO League (FLL) programs. Everyone who has been involved in FIRST® at either the elementary or secondary school level knows that it takes a lot to field a team, but the rewards for all who participate are often extraordinary.

We are soliciting proposals from all interested DoD labs because the number of NDEP sites exceeds the opportunities that DDRE funding has made available. NDEP has established a Robotics Coordination Team that will facilitate the selection process, provide an informal help desk, and serve as an interface on behalf of NDEP with the staff and leadership of FIRST®. Every effort will be made to keep parity between the services and to make awards to those that are most committed to providing a great learning experience.

Please find below a quick rundown that is meant to help all interested NDEP Site Coordinators submit proposals to the NDEP web site by March 31, 2011.

### **What is FIRST®?**

FIRST® (For Inspiration and Recognition of Science and Technology) is a non-profit founded in 1989 by Dean Kamen, a New Hampshire-based inventor and recipient of the prestigious National Medal of Technology. His vision is to spark the imagination and creativity by making hands-on problem solving cool. Teams are formed as an after school activity with guidance and sponsorship from professionals at science and technology-based organizations. FIRST® is comprised of several leagues (FRC, FTC, FLL) for students from six years old through high school. Today some 90,000 volunteers and 3,500 sponsoring organizations are involved in FIRST®. The FIRST® Championship is held in St. Louis at the Edward Jones Dome, where the organizers create the kind of excitement usually associated with bowl games. For more information see <http://www.usfirst.org/>.

### **What is Involved in Sponsoring a Team?**

**Calendar.** The FIRST® LEGO League (FLL) and FIRST® Tech Challenge (FTC) begins registration in May and issues their challenge in September. The FIRST® Robotics Competition (FRC), at the high school level, begins registration in October and starts early in January with regional competitions in March and the Championship in mid-April. A detailed season schedule is available on-line at the FIRST® website.

**Responsibilities.** NDEP sponsorship is intended to assist DoD employees who will volunteer as coaches or mentors to start new or continue FLL, FTC or FRC teams. Coaches and/or mentors of a FIRST® team are responsible for:

- Fielding a team of the appropriate size and age group as specified by FIRST®.
- Providing sufficient resources to successfully coach the team.
- Taking the team through the entire FLL/FTC/FRC season.
- Entering the team into a FIRST® local, qualifying, or regional competition.
- Taking the team to higher levels of competition should they advance.
- Promoting NDEP, along with their laboratory, as the team sponsor.
- Coordinating with and reporting progress to NDEP Support Staff.
- Abiding by all FIRST® and NDEP rules and regulations.
- Engaging other colleagues and the families of team members to provide support to widen ownership.
- Reaching out for help when necessary to be successful.
- Providing team reporting data to the NDEP FIRST® grant coordinators.

**Time Commitment.** The FIRST® season (FLL, FTC or FRC) is well-defined and occurs over a very compressed schedule that requires sufficient time to address the activities described in literature published annually by FIRST® prior to each season. The FLL/FTC seasons are approximately 12 weeks and formally begins in September with qualifying competitions in November and Championship tournaments in December or January. The FRC season is approximately six weeks and formally begins in January with qualifying competitions in March and Championship tournament in April. Coaches typically will meet with their teams regularly during the entire season in preparation for a competition; 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 80 hours for FLL/FTC teams and as much as 100 hours for FRC teams during the time prior to a competition. Additional time is required to prepare for and attend competitions. Should your team be fortunate enough to advance to the next level of competition, more time will be required and your season will be extended.

### **What does NDEP Sponsorship Cover?**

**Costs.** This NDEP grant will cover partial costs of fielding a team for participation in FLL, FTC or FRC. Funding will not be sent directly to labs, rather NDEP will establish an account with FIRST®, and NDEP sponsored teams will draw from that account per the instructions of the NDEP FIRST® grant coordinators.

For **rookie** FIRST® teams (new to FLL, FTC, or FRC), the following costs will be covered:

- For FLL teams: 1 Registration, 1 Field Setup Kit, 1 Robot kit
- For FTC teams: 1 Registration, 1 Robot Kit
- For FRC teams: 1 Registration which includes attendance at one competition and kit of parts as outlined by FIRST® on their web site.

For **veteran** FIRST® teams (returning to FLL, FTC, or FRC), the following costs will be covered:

- For FLL teams: 1 Registration, 1 Field Setup Kit
- For FTC teams: 1 Registration
- For FRC teams: \$3,000 toward team registration

**Please Note.** Grant costs will not be reimbursable or transferable. NDEP grants issued via FIRST® will not be able to be used for materials other than those listed here. If the team receives grants from more than one organization, and the grants are in conflict, the NDEP grant will be forfeited.

**Support.** Coaches and mentors of FLL, FTC or FRC teams 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 to this world-class support system, NDEP is providing support to labs through DoD personnel who have extensive experience in fielding FIRST® teams, and who have considerable expertise in both unmanned systems (real-world robotics) and mentoring youth. NDEP 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. NDEP support will also include periodic contact by personnel to determine how your season is progressing.

### **What are Award Criteria?**

1. Level of involvement of DoD site scientists and engineers as team coaches/mentors.
2. Level of commitment to stand up and support FIRST® teams.
3. Interest in supporting both a high school and “feeder” teams.
4. Recognition that all DoD-sponsored teams should reflect a representative mix of boys and girls from all backgrounds.
5. Engagement of local schools and/or community organizations.
6. Capacity to raise supplemental funds in the event that local teams advance.
7. Previous experience with FIRST®.
8. Linkage of participation in FIRST® with other STEM outreach.

### **What is the Timetable for Submission of Proposals and Notification of Results?**

Proposals must be submitted electronically at <http://www.ndep.us/usfirst> by close of business on March 31, 2011. The NDEP Support Staff will evaluate proposals during a review period according to the above criteria, and may contact you during that time for clarifying information. Teams that are selected for NDEP sponsorship will be notified by email or phone as soon as possible following the proposal review.

**Important. Proposals must be submitted by NDEP Site Coordinators at DoD laboratories throughout the nation. NDEP Site Coordinators must be registered on the NDEP website before they are able to submit proposals. A separate proposal must be submitted for each team for which you desire sponsorship.**

# Sample online application

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## NDEP

# National Defense Education Program

Building American Strength in Science and Engineering

**COMMUNITIES > US FIRST**      **PARTNER ADS**

All APPLICANTS must have registered at the [Forum](#).  
Please submit only one application per team.

**Laboratory Information** \* all fields required

Laboratory Name:

Location:

Branch of Service:

**NDEP Lab Coordinator Submitting Proposal**

Coordinator Name:       Email:  (address must end in .gov or .mil)

Work Phone:       Address:

City:

State/Zip:

**Name of DoD Team Coach/Mentor (Note: DoD volunteer cannot be a site coordinator)**

Name of DoD Team Coach/Mentor:       Email:

Phone:       Add. Phone:

Will this DoD volunteer be the primary coach for this team?  
Yes  No

Address:

City:

State/Zip:

**School/Organization**

Name of school/organization or location of proposed team:

Are you an existing team? Yes  No       If yes, what is your team number?

Contact Name:       Phone:

Requesting a grant for: FLL  FTC  FRC

Have you received NDEP sponsorship in the past? Yes  No       If yes, how many years

**Award Criteria**

What is the level of involvement of DoD scientists and engineers as team coaches/mentors?

What is the level of commitment to stand up and support new teams?

Introducing a brand new, totally interactive site dedicated to the exciting world of engineering  
[www.egfi-kl2.org](http://www.egfi-kl2.org)

### CALENDAR

### MEDIA

### COMMUNITIES

Describe your interest in supporting both a high school and "feeder" team (please provide specifics):

Do your DoD-sponsored teams reflect a representative mix of boys and girls from all backgrounds?

Provide descriptions of engagement with local schools and/or community organizations:

Describe your capacity to raise supplemental funds in the event that local teams advance:

#### Additional Information

Proximity to the DoD sponsoring lab and volunteer DoD workforce:

Describe your DoD volunteer's previous experience with FIRST:

Linkage of participation in FIRST with other laboratory STEM outreach:

Describe your ability to provide team reporting data to the NDEP FIRST Coordinators twice during the season: