



***FIRST* ROBOTICS**

PROGRESSION OF PROGRAMS

OVERVIEW OF *FIRST* PROGRAMS

FIRST is a family of programs starting in early elementary that allows the student to keep moving up to a new challenge all the way through high school.

- **Jr. *FIRST* LEGO League (Jr.FLL)**
Early elementary (K-3)
- ***FIRST* LEGO League (FLL)**
Late elementary – (starting in 4th grade)
- ***FIRST* Tech Challenge (FTC)**
Middle school
- ***FIRST* Robotics Competition (FRC)**
High School

Gracious Professionalism . More than Just Robots . Scholarships



FIRST ROBOTICS **PROGRESSION OF PROGRAMS**

Jr. *FIRST* LEGO League (Jr.FLL) (K-3)

DESCRIPTION: Two part focus

1. Build LEGO® model with one moving part
2. Create a Show-Me poster (similar to Science Fair posters) and practice presentation skills

LEGO We-DO® kit option teaches beginning programming skills

Teams participate in Expos to share and celebrate their achievements

Encourages a culture of sharing and learning from others

AGE GROUP: Kindergarten through 3rd grade

TEAM SIZE: Team size limited to 6, multiple teams encouraged

COST: \$235 for registration (\$50) and basic kit (\$185)
\$25 for each expo event (at the door)
No grants available

TIMELINE: August through March
Jr.FLL Expos often held with FLL events

REGISTER AT: <https://gofll.usfirst.org>





FIRST **ROBOTICS**

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FIRST **LEGO League (FLL) (Late Elementary)**

DESCRIPTION:

Three part focus

1. Fully Autonomous LEGO Mindstorms robot missions
2. Present a research project centered on real-world theme
3. Learn and demonstrate the *FIRST* Core Values

AGE GROUP:

Late elementary (starting in 4th grade)

TEAM SIZE:

Maximum 10 students per team, multiple teams welcome

COST:

\$785 for robot kit, field kit and team registration

\$50 for per event- pay at door

Inquire about our pilot program to run FLL
in the classroom with bundle discounts

2014 GRANT:

GM grant of \$300 to all new teams

Ford Motor grant of \$200 if Ford employee
involved with the team

TIMELINE:

Late August - early December

REGISTER AT:

<https://my.usfirst.org/fll/tims/site.lasso>





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***FIRST* Tech Challenge (FTC) (Middle School)**

DESCRIPTION: 18" x 18" robot
TETRIX kit with Mindstorms NXT controller

- Program in RobotC or Labview-
- Autonomous and driver control mode
- Engineering notebook documenting the process

AGE GROUP: Middle School (defined by your district/org)

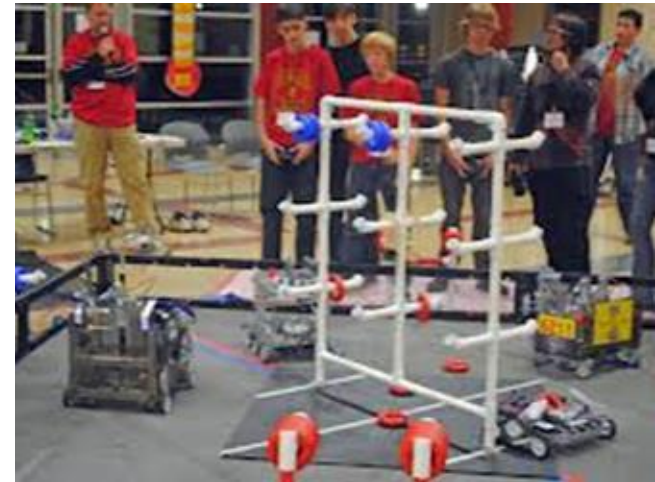
TEAM SIZE: Up to 15 students per kit/team
Multiple teams welcome

COST: \$1,225 for robot kit and registration
\$75-\$100 for each event (at door)

2014 GRANTS: State of Michigan and Private Grants make first year virtually free
(see next page for extensive list)

TIMELINE: September - late December

REGISTER AT: <https://my.usfirst.org/ftc/tims/site.lasso> (beginning in May)





FIRST ROBOTICS

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FIRST TECH CHALLENGE

Middle School Grants

STATE OF MICHIGAN MIDDLE SCHOOL FTC GRANT: (anticipated terms pending final approval)

Eligibility: Publicly Funded Middle Schools Only, Apply through MEGS+ Sept 8 – Oct 1

- \$ 300 to cover registration fee (priority on veteran teams)
- \$1,500 for a coach stipend (any adult, one per school, priority on rookie teams)
- \$ 100 if team qualifies for States (automatic)
- \$ 500 if team qualifies for Iowa Super-Regional (automatic)
- \$1,000 if team qualifies for Worlds (automatic)

State Grant MDE Webinars: Wed, August 27, 2:30 PM / Tues, Sept 16, 9:30PM

Webinar URL: <http://remc.adobeconnect.com/first-ta/>

Dial In Number: 888-808-6929 Access Code: 8105360

MDE Contact: Ann-Marie Smith, SmithA24@michigan.gov

ADDITIONAL ROOKIE MIDDLE SCHOOL FTC GRANTS:

Eligibility: All Middle Schools (may combine any/all below with State Grant)

- \$ 275 Waiver of FIRST registration fee (through FIRST HQ)
 - \$ 600* General Motors
 - \$ 400* Consumers (if zip code is in their service area)
 - \$ 300* Ford Motor (if Ford employee involved, open to veterans too)
- * FIRST in Michigan pays this amount to the team after proof of kit purchase



FIRST **ROBOTICS**

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FIRST **Robotics Competition (FRC) (High School)**

DESCRIPTION:

Large 5 ft tall, 120 pound remote-controlled robot
Common kit of components
Autonomous and driver control mode
C++, Labview or Java
Design and management software

AGE GROUP:

High School

TEAM SIZE:

No specified limit- 18 to 35 optimal

COST:

\$6,000 for kit and 2 events

2015 GRANTS:

State Grant and Private Grants make first year virtually free
State Grant Includes a \$1,500 stipend for coach
(see next page for extensive list)

TIMELINE:

January – April

SCHOLARSHIPS:

Over \$20 MILLION in dedicated *FIRST* college scholarships

REGISTER AT:

<https://my.usfirst.org/frc/tims/site.lasso> (May through early Dec)





FIRST ROBOTICS

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FIRST ROBOTICS COMPETITION

High School Grants

STATE OF MICHIGAN HIGH SCHOOL FRC GRANT: (anticipated terms pending final approval)

Eligibility: Publicly Funded High Schools Only, Apply in MEGS+ Sept 8- Oct 1

- \$6,000 to cover registration fee (includes kit + 2 events)
(rookie teams \$6,000 second year teams \$5,000, 3+ year teams \$3,000)
- \$1,500 additional spending money (rookies only)
- \$1,500 for a coach stipend (any adult, one per school) (rookies / veteran)
- \$4,000 if team qualifies for States (automatic for rookies / veterans)
- \$5,000 up to \$5,000 if team qualifies for Worlds (automatic for rookies / veterans)

MDE State Grant Information Webinars: Wed, August 27, 2:30 PM / Tues, Sept 16, 9:30PM

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ADDITIONAL ROOKIE HIGH SCHOOL FRC GRANTS:

Eligibility: All High Schools (may combine with State Grant)

FIRST Rookie 3 Year Grant: (last year's terms)

- \$4,000 first year
- \$2,000 second year
- \$2,000 third year

NASA Growth Grant:

- \$6,000 first year
- \$5,000 second year (must re-apply)



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EXPLOSIVE GROWTH LAST SEASON

<u>PROGRAM</u>	<u>TEAM GROWTH</u>
High School (FRC):	203 to 277
Middle School (FTC):	74 to 178
Late Elementary (FLL):	350 to 385

MICHIGAN LEADS THE NATION IN FRC TEAMS!!!!