



Team THRUST:
a 4-H Special Interest Club
of Huntington County



Navy A4-E Skyhawk flown by Jerry Smyth

Team THRUST #1501

www.huntingtonrobotics.org

(2000 Rookie Season)

Huntington County 4-H Robotics Special Interest Club

2010 Season Student Application Form



ABOUT FIRST

The FIRST (For the Inspiration and Recognition of Science and Technology) Robotics Competition is an exciting, nationwide competition that teams professionals and high school students to solve an engineering design problem in an intense and competitive way. The program is a life-changing, career-molding experience - and a lot of fun. In 2004 the competition reached more than 20,000 students on over 900 teams in 27 competitions. Other teams come from Canada, Brazil, Ecuador, Mexico, Great Britain, and almost every U.S. state. The competitions are high tech spectator sporting events, the result of lots of focused brainstorming, real-world teamwork, dedicated mentoring, project timelines, and dead-lines. Involvement in the FIRST Competition immerses you in the exciting world of design, engineering and team management. It provides a "hands on" opportunity for real world problem solving, team building and opens your mind to careers in engineering, the sciences and design. You learn far more than science, math and technology.

Through your partnership with professional mentors, you build self-esteem, self-confidence and develop critical life skills such as project management, teamwork, problem solving and appreciation of diversity. At the competitions themselves, you have an opportunity to hone your skills at marketing, public relations and scouting the strengths and weaknesses of your competitors. In short, students who participate in FIRST are better equipped to succeed in the real world.

BENEFITS OF TEAM MEMBERSHIP

- **SCHOLARSHIPS** - over \$11,000,000 in scholarships were awarded in 2009.
- **TRAVEL** - to Regional Competitions and possibly to the National Competition. This year we plan on attending the Purdue Boiler Maker regional and possibly one other event.
- **EXPERIENCE** - many corporations across the nation are participating in FIRST and want to hire FIRST students.
- Learn **NEW SKILLS** and **EXPLORE OPPORTUNITIES** in business, visual arts, science or technology.
- Learn **TEAM BUILDING** skills and **PREPARE FOR LEADERSHIP ROLES**.
- **HAVE FUN** meeting and networking with students from all over the country!



OUR TYPICAL SEASON

The team meets year round for fundraising, team building and organizational activities. Typically the team will meet once every two weeks for one hour, 1st and 3rd Thursdays. Please see website for times and locations of our meetings. The evening meetings are for team building activities or basic technical skills training.

Additional time is required for fundraising activities which are ongoing throughout the year. Students are expected to participate in the fundraising activities to support travel expenses for the team. Typical fundraising might include, car washes, raffles, candy sales, seminars or community involvement projects.

In early January, the team swings into full gear with the "Kick Off" when the year's game is unveiled. Students can expect to meet **daily** and on **Saturdays** for the **6 week** design and build phase. Students not active in the "build" process are involved in fundraising, community outreach, web site maintenance, marketing, spirit and more. During March and April are the competitions. We expect to attend at least 1 events which will be approved field trip absences from school. These competitions are tremendously exciting and fun for all! Eligibility for travel is described in our handbook.

During the post season, through the summer months, a core group of team members will participate in local scrimmages. Community awareness demonstrations and fundraising continue through post season. We also plan to attend IRI, the Indiana hosted Robotics Invitational. For more information please see www.IndianaFIRST.org

OUR GROUPS A detailed job description is listed below

Mechanical Engineering / Drafting Design Group

Responsibly will include oversight of the mechanical engineering robot design. Responsible for project management. Will be responsible for robot weight and height restrictions. Shall coordinate with the electrical team the various mechanical tasks required to control mechanical designed portions of the robot. Will be responsible for developing and teaching classes to other team members the different parts of the robot and how they work. Responsible for robot inventory and parts. Your classes should include how the drive system works, usage of air cylinders, how to calculate weights, understanding metals and welding, teaching the flow of engineering design from paper to reality. Responsible for teaching safety to the team. Shall be appointed the team safety captain. Responsibly will include oversight of robot design drawing package. The drafting group should work closely with engineering group #1 and engineering group #2. The drafting team shall provide mechanical and electrical drawings for the robot.

Electrical / Software Engineering

Responsibly will include oversight of robot electrical system, pneumatics, and software systems. Will be responsible for developing and teaching classes to other team members the different parts of the robot and how they work. Your classes should include how the control system functions, how to download information to the robot, basic autonomous mode, teaching and understanding the components of the control system and what they do. Explain the wiring and understand the pneumatics control system and air consumptions.

Publicity / Marketing / Website

Shall oversee and develop team website. Should work with HNHS Teacher to help recruit members. Shall be responsible for the team year book page of description. Shall write up any newsletter releases about the team. Responsibly for gathering team information and submitting Chairman's Award. Shall be responsible for organizing team buttons and gizmos at regional events. Responsible for updating the team on any changes from FIRST website. This includes keeping the team informed on any rule changes posted on the FIRST website. Shall be responsible for always having a camera or video camera at every event or public appearance the team is involved with.

Animation

Responsibly will include reading and following the rules for the animation requirements of FIRST. See rules for specific details.

Finance

Responsibly will include oversight of team finances and book handling. Applying for and organizing team grants and scholarship submissions. Will work with 4H and follow 4H financial protocol. Shall act as our sponsorship contact and make contact with potential sponsors. Shall provide information to the other team members on how to apply for scholarships. Shall be responsible for team checking account and handling of all funds for the team. Shall provide a finance report at every robotics meeting. Shall develop a team budget.

Team THRUST #1501 2010 Application Form

NAME _____ DATE _____

ADDRESS _____

CELL PHONE # _____ E-MAIL _____

GRADE IN 2009-2010 (circle one) 6 7 8 9 10 11 12

DATE OF BIRTH _____

PARENT/GUARDIAN NAME _____

PARENT/GUARDIAN OCCUPATION _____

PARENT/GUARDIAN WORK ADDRESS _____

PARENT/ GUARDIAN HOME PHONE WORK PHONE _____

What aspects of the team are you interested in? Check all that apply. This does not lock you into a work area. We are interested in learning more about you. Experience is not necessary, you will be offered Instructions.

Mechanical Engineering

Electrical / Software Engineering

Drafting Design

Publicity / Marketing / Website

Finances

Animation

Do you have any experience in the following areas? What kind, how much and how long?
For example "took 1 semester course in school", "enjoy as a hobby for past 5 years", etc.

AutoCAD

AutoCad Inventor / Solid Edge

Bryce 3D / 3DMAX / Maya

C++

Linux

PHP Scripting / MySQL Databases

CPanel Web hosting software

Dreamweaver MX

Adobe Photoshop

Fireworks MX

Flash MX

Microsoft Word

Microsoft Power Point

Microsoft Publisher

Video Editing (Vega Video / Adobe Premier

Digital Photography

CNC Machining

Shop Classes

Welding

Wood Carpentry

Basic Electronics

Bread Board Building

Soldering

Wood Carpentry

Finances / Budgeting

Journalism

Leadership Position

Are you involved in other organizations, extra-curricular activities or sports?

If "YES", please list them:

Are you currently a member of 4H?
Membership to 4H will be required. YES NO

Are you able to attend after school meetings? YES NO

Are you able to attend evening meetings?
Most take place from 6:00PM to 8:30PM YES NO

Are you able to attend Saturday meetings?
Most take place between 9:00AM to 4:00PM YES NO

As a member of the team you are required to attend a minimum of 70% of team meetings / activities.
Are you able to meet this requirement? YES NO

Are you able to travel to competitions?
These require parental consent. Inability to travel will not prevent you from team membership. YES NO

If "YES" to the previous question, are you able to meet the financial obligation for travel?
There will be a minimum of \$50 per trip plus food and personal expenses to a maximum of \$500 per trip depending on fundraising and event location.
We will always try for \$50 per trip. YES NO

I, hereby verify that the information and statements on this application are true, to the best of my understanding. I also pledge, if chosen as a FIRST team member, to meet all requirements of scholastic standing, fundraising, attendance and participation in order to remain a member in good standing.

student signature date

I, as parent or legal guardian verify that I have read and understood all of the information contained in this information package.

parent signature date

*Please snail mail your application form **signed** or give to an existing robotic team member.
Chris Elston
923 N LaFontaine Street
Huntington, IN 46750
260-359-0943*

*You will be notified as to your acceptance on the team by.
If accepted, you and your parent or legal guardian must attend the team kick off meeting in January.*