NorCal FTC Rookie Coach Workshop

October 5, 2022
Introductions

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Our Agenda

- Basics
- FIRST
- Playing at Learning
- NorCalFTC.org
- Portfolios/Awards
- Competitions/Advancement
- Resources
Housekeeping

• Everyone is muted.
  • Will stop periodically for questions
  • Type your questions in the question box. Please try to be clear.

• Will be recorded and posted on our website

• Plan to be done in an hour - can take longer for questions if necessary
More than Robots!

**FIRST Core Values**
We express the *FIRST*® philosophies of *Gracious Professionalism*® and *Coopertition*® through our Core Values:

- **Discovery:** We explore new skills and ideas.
- **Innovation:** We use creativity and persistence to solve problems.
- **Impact:** We apply what we learn to improve our world.
- **Inclusion:** We respect each other and embrace our differences.
- **Teamwork:** We are stronger when we work together.
- **Fun:** We enjoy and celebrate what we do!

*Gracious Professionalism*® - “Doing your best work while treating others with respect and kindness - It’s what makes *FIRST*, first.”

*Coopertition*®
*Coopertition*® produces innovation. At *FIRST*, *Coopertition* is displaying unqualified kindness and respect in the face of fierce competition. *Coopertition* is founded on the concept and a philosophy that teams can and should help and cooperate with each other even as they compete.
Be the adult in the room - literally
We are here to enable the kids to:

Be Safe
Learn Stuff
Have Fun

A Mentor...
- Requires no special skills, but should have patience, dedication, and a willingness to learn alongside the team.
- Is any person who works with the team in his or her area of expertise, for as little as one team meeting or as many as all of them.
- Helps provide valuable support and serves as a resource in his or her area of specialty.
- Directs the process the team follows to solve the yearly game challenge, without providing the solution him or herself.
- Is a coach, teacher, motivator, and facilitator.

Each team must have at least two mentors who are 18 years old or older.

In FIRST Tech Challenge, it is important that mentors and students are equal and that the relationship is a partnership. Each person works collaboratively towards a mutual and beneficial goal. To succeed, all the mentors and team members must commit to this.

Mentors should also be willing to acquire some basic knowledge of programming and robot building. Many teams enlist the support of a technology teacher or technical mentor for additional assistance. FIRST strongly encourages teams to invite people with backgrounds in engineering and programming to share their knowledge and experience.
Not your Toys!*

Advice

Advice – What you would do

Counsel / Mentor – Ask what they will do

(*Of course you can have fun too and play with all the toys – except their robot!)

Counsel

In your team’s rookie year, focus on enjoying the first year of participation as a survey of the program. The objective should be to fully experience FIRST Tech Challenge. Once a team has a positive experience, based on realistic goals, your students will overflow with ideas next year.
FIRST
For Inspiration and Recognition of Science and Technology

○ “Parent” organization
  ◦ 7,696 FTC teams (2019-2020)
  ◦ 77,000+ participants (Ages 12-18; Grades 7-12)
  ◦ FIRST teams overall in 110+ countries

○ FIRST manages:
  ◦ Team Registration and $295 registration fee
  ◦ YPP (Youth Protection Program) Coach Screening
  ◦ Student registration – team roster
  ◦ Storefront – purchase control system and kit of parts
  ◦ Annual definition of the game and rules
Playing at Learning – www.norcalftc.org

● Volunteer driven local non-profit 501(c)3
  ○ (Also manages FLL Challenge and FLL Explore)

● Northern California FIRST Program Delivery Partner
  ○ Provide local support to teams
  ○ Manage and support local competitions – Qualifying Tournaments (QTs) and Pilot Leagues
    ■ Including registering for all competitions!! – NOT on the FIRST site
  ○ Runs NorCal Championship event
    ○
FIRST Dashboard

- Create a team
- Edit Team Information
- Pay for team/storefront
- Invite Coaches/Mentors

- YPP Screening for mentors
- Accept/Invite students for team
- Dean’s List Nominations
- Grant information
Choose an Electronics Set

The modules in the Electronics Set control the flow of information to and from the various components on the right. Each team will be allowed to purchase one Electronics Set for the 2022-2023 FIRST® Tech Challenge season.

REV Robotics Control Hub
- Includes:
  - REV Robotics Control Hub
  - Phillips #2 head screws & nuts (set of 45)
  - RoboClaw 100 Brushless DC Motor Control Board
  - 10V/2A Power Supply adapter cable
  - Color sensor with cable
  - Touch Sensor with cable

Notice:
The REV Robotics Control Hub inventory is limited and may be backordered. First-year (novice) team orders will be prioritized as they are received. All products will be shipped separately upon ordering.

FIRST is working closely with supply partners to address these supply issues as it becomes available. Customers are advised to check the website for available inventory.

Limit one (1) per team.

$282.00 (USD)
NorCalFTC.org

○ What you need to know locally

○ 1st – Sign up for Google Email Group!!

○ PLEASE READ OUR EMAILS!!
NorCalftc.org

- “Items of Interest”
- Team List
- Qualifier List and Status
- FTC QT Registration
- Advancements

Items of Interest

Thank you for your patience as we update this site with the 2022-23 game, Power Play!

Register for the Town Hall Meeting for Qualifier Registration – Oct 10th, 7:00pm

Register for the Rookie Coach Workshop – Oct 5th – 7:00pm

Team Workshops

Form to get more information about volunteering: https://forms.gle/QbJpRXQDy7GszCSHA

Here’s a link to older Items of Interest
Engineering Portfolio......and Notebook

The Engineering Process – Good!

Good Notebook = Learning

Portfolio required to be considered for judged awards
What do you want to tell the judges?
Absolute requirements if it’s to be considered
Must have team number on the front
Read the Game Manual 1 for recommendations
Start TODAY if you haven’t already
Electronic platform will be easier to share – in person should be printed.

Notebook is optional although HIGHLY recommended

Information about Portfolios in
Game Manual Part 1

Notebooks recommended, not required
Awards – understand the criteria

FIRST Resource Library – award descriptions

Game Manual 1 Section 9 – Judging and Awards

Dean’s List Nominations - Game Manual 1, Section 10
   Be sure to answer the questions in your nomination
   Nominations due by Jan 15th, 2023
   Dean’s List Interview only event late February (date TBD)

Promote and Compass Awards
   Only at Championship
   All teams eligible
What to expect at competitions

• Game Manual Part 1 section 3.0 & 4.0

• FTC Resource Library – “Preparing for Competition”
  • Arrive when doors open – not when you are scheduled for inspection or judging
  • Be prepared!! Bring your working robot!
  • Tournament Directors will send out information specific to their site – share this with team and parents!
  • Plan your food – don’t let your team get “hangry” – stay hydrated!

• Set team’s expectations accordingly
  • Gracious Professionalism above ALL things – even when things go wrong
  • It may be loud, frantic, stressful, but FUN!
  • Look at other robots and talk to other teams
Advancement to Championship

Ratio for advancement = # teams in championship/total number of plays
(# teams in championship depends on # teams registered)

Event advancement = ratio * number of teams in event

Then rounding and lottery spots.

Qualifiers and League Tournaments are equal in figuring their advancements.

Advancement List in Game Manual 1, Section 6.2

6.2 Order of Advancement

If the Team listed has already advanced or there is no Team filling that description (as in 2nd Team selected at another Tournament, or 3rd place award finalist at another Tournament), the advancement will continue in order:

1. Optional – Qualifier host Team (Note: Each region’s program delivery partner decides if this advancement opportunity is offered. The Team MUST compete at one other Tournament within the region and must meet the criteria set forth by the program delivery partner in the agreement. This advancement applies to qualifying Tournament hosts only, and does NOT apply to host Teams of events, league Tournaments, super qualifying Tournaments, or championship Tournaments.)
2. Inspire Award Winner
3. Winning Alliance Captain
4. Inspire Award 2nd place
5. Winning Alliance, 1st Team selected
6. Inspire Award 3rd place
7. Winning Alliance, 2nd Team selected
8. Think Award Winner
When to Compete?

- Robot is never “done” – don’t wait for it
- Consider Schedule – currently much of our availability is “early”
- Early qualifiers – “no one” has played before, winning scores typically lower; likely first try so no iteration
- Later qualifiers – more time before competing, winning scores higher, possibly some second plays; may be 2nd iteration for some teams
- Larger events will advance more teams (it’s a ratio)
- Smaller events mean you’re competing against fewer teams

You will get to list your preferences then we’ll have a lottery – you won’t necessarily get your first choice.

Oct 10th Town Hall!!
Resources

Be willing to look and read a bit

Official Manuals
Game Manual Part 1 (Robot, Tournament)
Game Manual Part 2 (Game)

FTC Forums – Official Q&A

Team Calls – Look for dates in Team Blasts (Old Team Blasts on website)

FTC Scoring System

https://ftc-docs.firstinspires.org/
Technical Mentoring Resources

NOTE – Not all are monitored or promoted by FIRST

Component and System Documentation
• **FIRST Sites**
• Vendor Sites (Next Slide)
• Reddit [https://www.reddit.com/r/FTC/](https://www.reddit.com/r/FTC/)
• Discord
• Chief Delphi [https://www.chiefdelphi.com/c/other](https://www.chiefdelphi.com/c/other)

Training, including mechanical design
• Team documentation (Google is your friend)
• Game Manual Zero [https://gm0.org/en/latest/index](https://gm0.org/en/latest/index)
(Caution, mainly good, but biased)
Vendor Sites

REV Systems Documentation

Start here: https://www.revrobotics.com/ftc-guided-experience/

Documentation

- Control Hub User's Manual
- Getting Started with the Control Hub
- Hello Robot: Introduction to Programming
- Control Hub Troubleshooting Guide
- REV Hardware Client User's Manual
- Color Sensor V3 Datasheet
  - Videos:
    - Getting Started: Control Hub
    - Getting Started with the Control Hub and the REV Hardware Client
    - Wireless ADB on a Control Hub
    - Pairing Driver Station to a Control Hub
    - Troubleshooting: Control Hub to a Computer over WiFi
    - Troubleshooting: Connecting a Second Expansion Hub
Vendor Sites

AndyMark and Pitsco also have building and programming resources including videos and CAD models.

GoBuilda also gaining popularity – not currently a supplying partner for FIRST.
Some Tips from the Global Chief Ref

- Read the FTC Manual!
  - several changes to “usual” items
- Keep Up with the FTC Q&A!
- Join the monthly “Team Gameplay” webinars
Questions

• Before asking questions – look for your own answer
• Was it in an email? Something posted on our site?
• Emails work better
• Phone calls – if we don’t answer, leave a detailed message and your team number and perhaps your email address
• Patience 😊

Now – what questions do you have for tonight?