NorCal FTC Rookie Coach Crash Course

September 18, 2021

Introductions

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Agenda

o FIRST/Playing at Learning Overview

o Registration and your Dashboard

o Control System and Equipment

o Organization and Qualifiers in NorCal

o Engineering Notebook

o What to expect at competitions

o Resources

Housekeeping

- Everyone is muted.
  - Will stop periodically for questions
  - "Raise your hand" if you have a question and I'll unmute you

- Will be recorded and posted on our website

- Plan to be done in an hour - can take longer for questions if necessary

FIRST
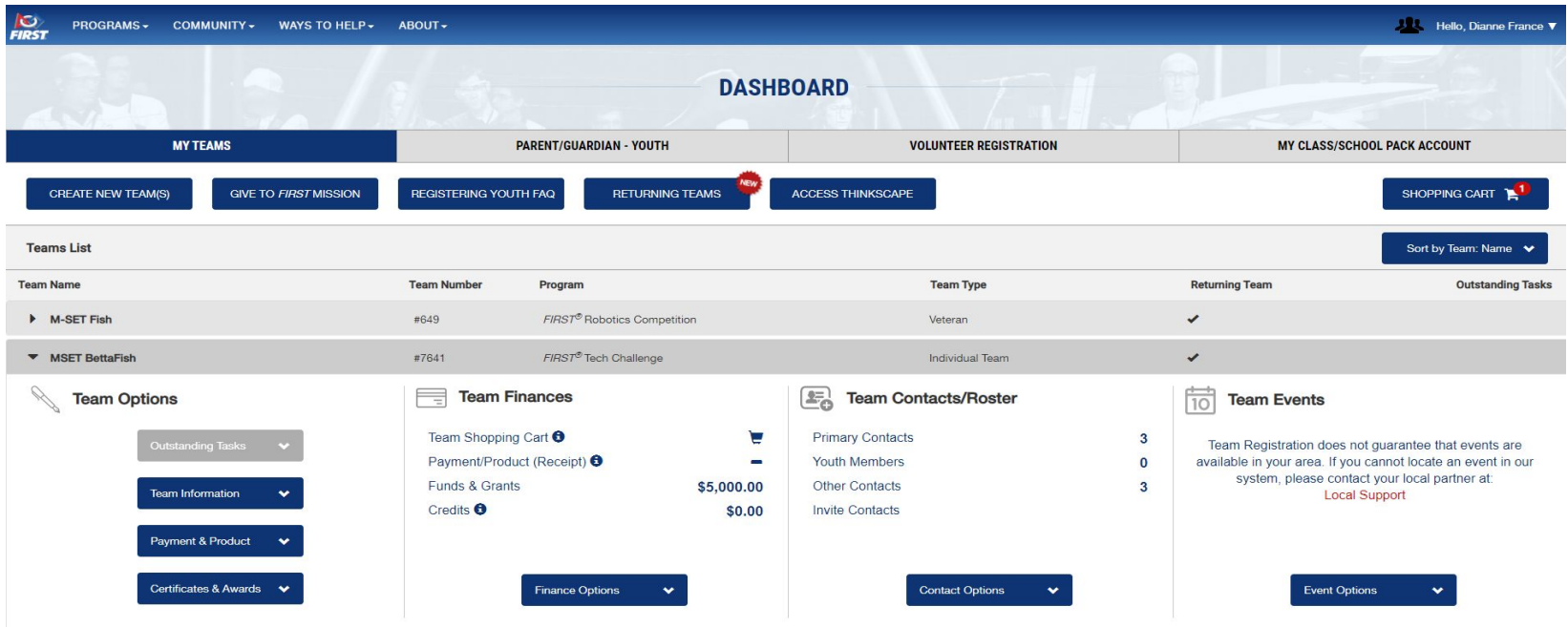## For Inspiration and Recognition of Science and Technology

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

o FIRST manages:
- Team Registration and $275 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

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

o Northern California FIRST Program Affiliate Partner
  o Provide local support to teams
  o Manage and support local competitions – Qualifying Tournaments (QTs)
    o Including registering for all competitions!! – **<u>NOT</u>** on the FIRST site
  o 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

Control & Electronics System

Control & Communication Set 5

Includes:

- Logitech Gamepad F310 (2)
- REV Driver Hub (1)
- Logitech WebCam (1)

$210.00 (USD)

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REV Robotics Control Hub

Includes:

- REV Robotics Control Hub
- Phillips – head screws & nylock nuts (set of 4)
- Power Switch with bracket and XT to Tamiya adapter cable
- Color sensor with cable
- Touch Sensor with cable

$239.00 (USD)

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○ You can use
  - Rev Control Hub with an optional Rev Expansion Hub
  - Rev Expansion Hub and an Android phone (with an optional 2nd Expansion Hub)
  - (Legal) Android phone as Driver Station

Competition Set

TETRIX® *FIRST®* Tech Challenge Competition Set

TETRIX *FIRST* Tech Challenge Competition Set includes:

- 824 TETRIX MAX building elements designed for competition
- Heavy-duty structural, motion, and hardware elements including a variety of wheels, and aluminum gears, channels, flats, and connectors
- Four TorqueNADO® DC motors with encoders, motor cables, aluminum mounts, and REV hub conversion cable pack
- Four 180-degree standard-scale servo motors and aluminum mounts
- Rechargeable battery pack and charger
- Assembly tools
- Sturdy storage bin, lid, and sorting tray

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In Stock

ADD TO CART

$545.00 (USD)

REV *FIRST®* Tech Challenge Competition Set

- New REV Building parts with over 1350 pieces
- Channel and Extrusion aluminum structure
- Metal and plastic gussets and brackets
- Configurable UltraPlanetary Gearboxes with HD Hex Motors
- Smart Robot Servos with multiple attachments
- Bearings and hex shafts
- Multiple wheel options (Omni, Traction, Grip, Intake)
- #25 sprockets and chain
- 7 sizes of hex gears
- Fasteners and tools including Chain Tool
- Slim Robot Battery and charger
- Plastic carrying tote

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In Stock

ADD TO CART

$477.00 (USD)

o Sets are not required but make getting started easier.

o Each have pros and cons – discounted through storefront

AndyMark kits

- Offers starter kits
  - More expensive
  - Many options including drive base kits

- Mechanical Parts
  - Wheels
  - Motors

FIRST Tech Challenge Foundation Bundle

am-3923

$589.00

Configurable FTC Chassis

$235.00 − $689.00

NorCalFTC.org

o What you need to know locally

o 1st – Sign up for Google Email Group!!
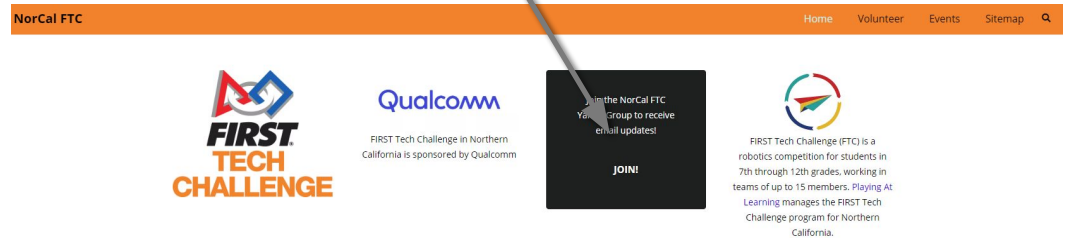
o <u>Team List</u>

o Qualifier List and Status

o FTC QT Registration dates

o Advancements

Advancement Strategy

o Play early!
  - o Teams may not feel like they're ready but need to stop and evaluate
  - o Then iterate and plan course for improvement

o Consider an advancement strategy
  - o "Double" larger events will advance roughly twice as many teams; "Single" events will have fewer teams
  - o Early events require lower scores to "win"
  - o Later events may have some "wildcard" teams

Advancement Strategy (continued)

o Have a competition plan
- o Know what events to sign up for and when
- o Be available to execute

o Have a back-up plan
- o Some events may fill quickly

- o Financially committed when register - no free cancellations
- o May have a waitlist - details will come out later

Engineering Portfolio
...and Notebook

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

Notebook is optional although HIGHLY recommended

(Pretend no pandemic)
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

(Today's World)
What to Expect at "Competitions"

- Game Manual Part 1&2-Remote Events Sections 3.0 & 4.0
- Remote Field Requirements - document in Game & Season section
  - Will play and score 6 matches over 6-7 days
- Remote Judging - Zoom platform
- Plan for 2 scheduled interview sessions
  - Initial Team Interview (up to 5 min presentation then Q/A)
  - Follow-up session (similar to traditional "pit" interviews)
  - Documents will be submitted prior to event day
    - Team Roster, Engineering Portfolio, Feedback form (if desired), Control Award Submission (if desired)
  - Good idea to have good team and robot pictures

As we get further along we will be hosting Town Hall Meetings and platform trainings! Please be patient!

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
    Robot Game
    Robot Construction
    Judging
    Tournament

Community
    Technology help

Resources (cont)

- Team Management Resources

- Firstinspires.org/resource-library/ftc/team-management-resources

  - Mentor Manual & Coaches Playbook
  - Forum Registration Instructions
  - Robot Building Resources
  - Programing Resources
  - Dean's List
  - Prep Competition Checklist
  - etc,…

Questions?

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