

Hippie Panda Coaches

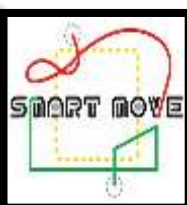
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Background



- Involved with FLL since 2007: *Power Puzzle*
- Coached two school teams in 2008: *Climate Connection*.
 - Finger Lakes Champions Award
 - 2009 Climate Connection, World Festival Participants
- Started Hippy Pandas, a Girl Scout Team, in 2009 – *Smart Move*
 - Finger Lakes Champions Award:
 - 2011 Food Factor, World Festival 1st Place Gracious Professionalism
 - 2013 Nature's Fury, World Festival 2nd Place Team Work
 - 2014 World Class, World Festival Participants



Coaches References

- FLL Home:
 - Many great resources, just a few listed below
- Coaches' Handbook
 - FLL Home: Challenge: Coach/Team Resources
 - Read it, refer to it for guidance.
- Rubric for Judging
 - FLL Home: Events: Judging and Award
- TechBrick website – forms, worksheets
 - www.techbrick.com
- Programming
 - www.EV3Lessons.com

What makes up an FLL Team?

- *FIRST*® LEGO® team has 2 -10 members ages 9 -14.
- Mentors: Older Students, Past FLL participants, High School Robotics team members, College Students
- Parents: Can help with fund raising, driving, shopping and networking for experts
- Reach out to the community: Co-workers, teachers, local businesses, college students

FIRST[®] *LEGO*[®] League Core Values:

Core Values:

- We are a team.
- We do the work to find solutions with guidance from our Coaches and Mentors.
- We know our Coaches and Mentors don't have all the answers; we learn together.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences with others.
- We display Gracious Professionalism[®] and Coopertition[®] in everything we do.
- We have FUN!

Hippie Panda Meetings

- Meeting Location: Our House
- How Often:
 - 1-2 weeknight meetings 6:30 – 8:30.
 - One longer weekend meeting (bring lunch).
 - Closer to competition, may/will add additional meetings.
- Field Trips – as needed for the project

Team Organization & Meeting flow

- We have a team structure with each girl having equal participation in all aspects of the challenge: Project, Programming and Building the Robot.
- Music is important to us, it makes the meeting fun. We play upbeat music in the background all meeting long.
- Rotate tasks at each meeting: building attachments, programming, research for project, making posters, working on presentations.
- Stress breaks include *Just Dance* and being silly, snacks (provided by parents)

Beginning of Season

- Ice cream sundae meeting – watch release videos and build models for the field
- Read complete Challenge release as a team.
 - Each girl takes turn reading out loud a section, rule or mission. This gives them practice speaking in front of people.

Robot Challenge

- While reading a mission the girl activates the models and moves them around the board.
- They rate each mission Easy, Medium or Hard.
 - They document the ratings in the team notebook.
- Then they start to brainstorm what missions might be combined in a launch. They discuss advantages of different combinations.
- Talk about what type of robot they want to build: two wheel and caster, wheel size, tall, narrow, low etc... *Make this decision very early!*

Robot Base Reference EV3lessons.com

- Take your time to build your base robot before jumping into attachment building and solving missions.
- If you are just starting out, it is okay to start with a solid base robot design from someone like LEGO, EV3Lessons, or a book. Start with a basic design that you can add on to so that your team can discover on their own. Be sure you cite the source for your design/strategy ideas.
- Take time to test your own ideas.

Programming

Reference EV3lessons.com

- Programming – go through tutorials at EV3lessons.com
 - Learn basics: programming of motors, use of sensors, following a line
- The team keeps an Engineering notebook.
- The girls write what they want the robot to do for each mission. Ex. Go straight to black line, turn north 90 degrees, go forward 10 cms.
- They then start to write the code.
- Have the team write comments for each block of code in the program.
- When they are trouble shooting document what they tried and their changes in the Engineering notebook.
- SAVE OFTEN
- Make back up after each night.

Project

- Start by reading the Challenge handout
- Each girl takes turn reading a section. One girl scribes the answers to the questions during the brainstorming session.
- We take a team vote to identify the top 2-3 problems.
- Then we take these problems a little further using the guide questions in the challenge handout.
- Vote to choose the problem.
- Then research current solutions.
- Eventually we come up with our innovative solution.
- Develop prototype, talk with experts, share project

Elements of the Project

- We document our project in a PowerPoint deck as we go.
- Identification of the Problem
- Current solutions to project
- Identification of innovative solution
- Make prototype, talk with experts, improve idea
- Cost analysis
- Share: with people impacted, government, social media, school, community etc.
- Use multiple types of research sources: internet, interviews, books, museums, magazines, videos etc.

Project Presentation: Judging

- **All** team members must participate in judging presentations. 5 minute for presentation (includes setup) and then 5 minutes for question/answer period.
- Presentation must be live and may include a skit, posters, TV interview style, multimedia,...
- Use props, costumes, be creative and have fun.
 - Identify your problem
 - Explain your innovative solution
 - Describe how you shared
- **NO ADULT INVOLVEMENT**

Robot Design: Judging

- Typically team talks 5 minutes then 5 minutes answering questions in the judging session.
- We use the technical executive summary (found on FLL website). This helps the girls to organize their presentation.
- We introduce our team and robot. We describe the design of our robot.
- We have each girl explain a mission as it runs on the field. They explain attachments and special program features. We also discuss what we tried and how it evolved to the final version. (The Design Process)
- Brag about your robot. If you don't tell the judges, how will they ever know!!
- **NO ADULT INVOLVEMENT**

Rubrics, Rubrics, Rubrics

- Look at the Judging Rubrics for each area of Judging
 - Core Values
 - Project
 - Robot Design
- Rate yourself on each section and see where you can improve your team.