Practice #8

Preparation

- Find the materials for the Stick Images team building activity
- Become familiar with the Stick Images activity
- Find the programming videos to build on what they learned last week. We will have some posted on our website http://gillespie.agrilife.org > 4H > Robotics > Resources for FLL Coaches.

Beginning

5 min - Go over the plan for today's practice with the team

Explain that the team will review CORE value #4, learn about the gyro sensor, design with popsicle sticks, work on the robot programming and research project, and start discussion how they are going to present their research.

10 min – Review Core Value #4 – We honor the spirit of friendly competition

This is where FLL™ is really different from most other sports and activities that they are involved with. One of the main goals is to do well at the tournament, but the goal is also to help other teams. If a team forgets something, offer to let them borrow yours. If there is any way that your team can help another team, help them! Of course you should cheer for your team; but cheer for other teams as well.

You can also go around to other teams and learn what they do. How do they program? What has been working for them? What do they do to build teamwork? Encourage team members to talk with other teams and expand on their knowledge.

Team members also have to teach their parents to be supportive of other teams and officials. If parents are ugly towards another team or the officials, then a team can actually be penalized for this. So, tell parents to behave!

15 min – Watch an Introduction to Programming Video

11 min - Video from Darren Wilson about using the Gyro Sensor
https://www.youtube.com/watch?v=S5SjhfVPbNs&list=PL0DNoa_lcfo_UGoEhfY0SNB5KZUJ0RYmN&index=7

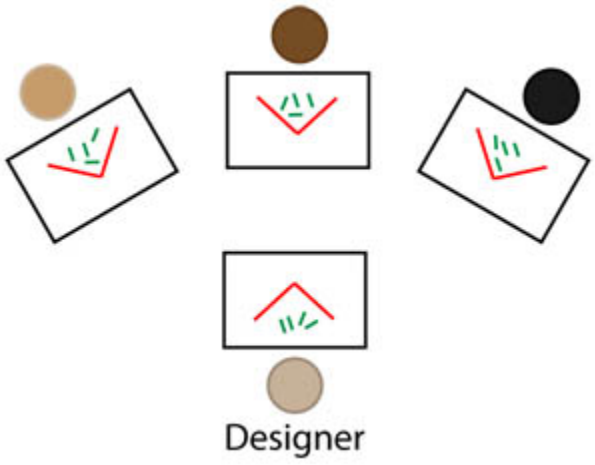
Team Building Activity

20 min – **Stick Images**
http://nrich.maths.org/6980
Idea originated from the website link above, but was modified for our purposes.

Materials Needed – popsicle sticks

Ask one team member to sit in front of the other team members with their back facing the team. This person is the designer for this activity. The designer takes some popsicle sticks and comes up with a 2-dimensional design and places the design in front of them.

Then, the designer must describe step by stop how to make the design that they created. Once they finish, the designer then turns around to see if they were able to describe to their teammates in a way that they could copy their creation.



NOTE: Team members can ask questions about the design at any time and the designer answers in as helpful a way as possible.

NOTE: the diagram of the activity is denoting what it will look like when the designer turns around to see what their teammates have made. During the design and description part of the activity, the designer's back is towards the other teammates.

You can switch out the designer with other team members.

Break? - If your team is made up of mostly 4th or 5th graders, they might need a little break at this point, so you can run outside and play tag or something similar for a few minutes. If you have mostly older members, then you might be able to push on.

Main Part of Practice

70 min – Programming Robot Missions and Research Project

Group 1 – Program Robot Mission

Group 2 – Research Project

You don't have to do it this way, but I have found it helpful to divide the group in half for this next part of the practice. One group will pick a mission to work on and continue programming. The other group with work on their research project. Half-way through the main part of the practice, switch groups.

Wrap Up

10 min – Start Discussing how the team will present the research project

(skit, song, posterboard, formal presentation, etc….) Review the criteria for what is expected with the presentation of the research project. You should also look over the judging criteria to make sure that you team's presentation will cover the material that the judges will be looking for. Judging rubrics can be found on our website http://gillespie.agrilife.org > 4H > Robotics > Resources for FLL Coaches.