

## Practice #2

### Preparation

- Find the “**Official Research Project Topic Video from FIRST**” video. We will post it on our website <http://gillespie.agrilife.org> > 4H > Robotics > Resources for FLL Coaches.
- Become familiar with the Help Harry Team building activity and find the needed materials in the teambuilding activity box.

### Beginning

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

Explain that the team will do a team building activity to build communication skills, learn about what their research project will be, and they will learn about what they have to build their robots with.

### Team Building Activity

#### Help Harry

<http://www.theteacherstudio.com/2015/09/engineering-inquiry-and-cooperative.html?m=1>

Harry is one of the puffballs that you will find in your teambuilding packet. It is the fuzzy ball with the googly eyes.

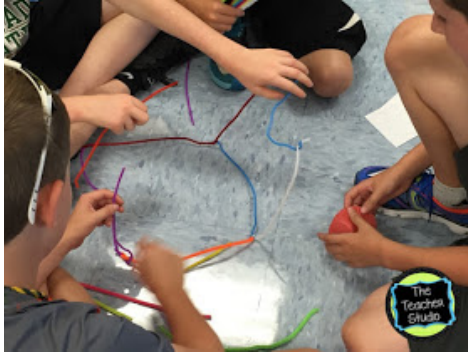
Materials Needed:

- Pipe cleaners
- 12 inches of masking tape
- 2 muffin liners
- Piece of aluminum foil
- 2 index cards

Divide your team into 2 groups of 3 and give each team the same amount of materials. Ask each team member to build a safe perch for Harry with the materials that they have been given.

First, give each group a few minutes to come up with a sketch of their design.

Then, give each group 10 minutes to construct their perch using the materials that they have been given.



Once the construction time is over, hand each team a Harry to see if their perch is safe for Harry to sit in.

## Main Part of Practice

### **10 min – Watch the Official Research Project Video from FIRST®**

This will help your team to become familiar with what they will need to do for their research project.

### **10 min – Then talk through the research project**

Lead the discussion by going through the process step by step using this season's guide in your coach's handbook

### **20 min – Spend this time brainstorming ideas**

Ask one of the team members to keep notes of their ideas so that your team can vote and decide on your topic at the next practice

**Break?** - If your team is made up of mostly 4<sup>th</sup> or 5<sup>th</sup> 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.

**55 min – Go through the “What is a robot and what do we have to build it with” PowerPoint** found on our website <http://gillespie.agrilife.org> > 4H > Robotics > Resources for FLL Coaches.

Use this PowerPoint and the team kits to allow the team to have a chance to look at what they have to build their robot with.

Ask the team to start sketching possible designs for the robot and the robot arms. (keep these sketches!)

**If the team has decided on a design, then they can start building.** NOTE: They will want to start building before designing because they are so excited about building, but try to encourage them to really think about their design before they start building.