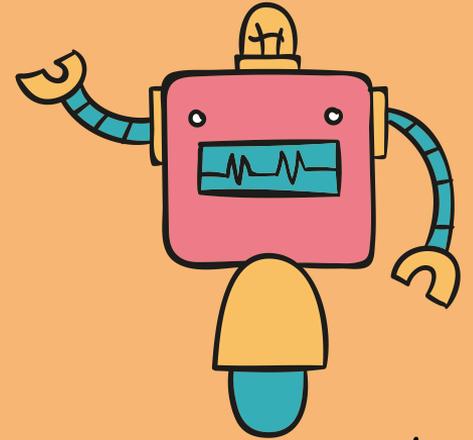
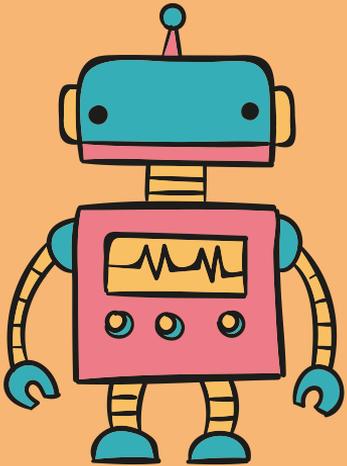


CCTS FLL WORKSHOP

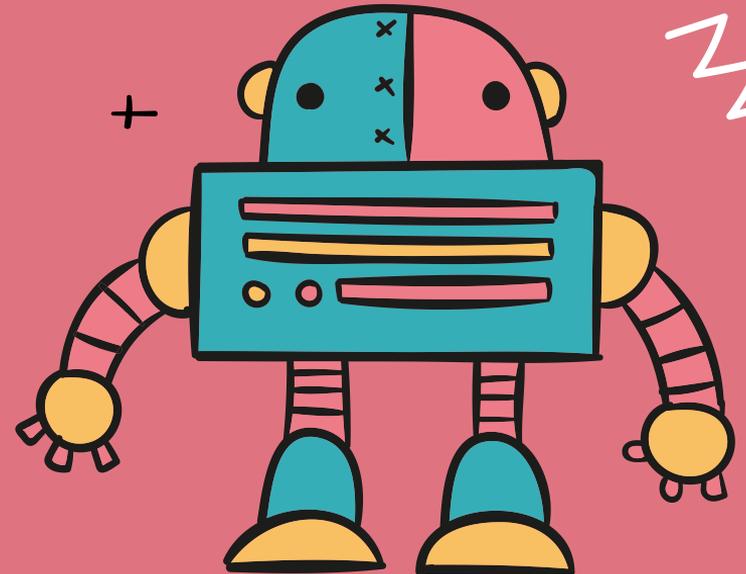
Presented by SOUPERBOTS Team Members





Overview

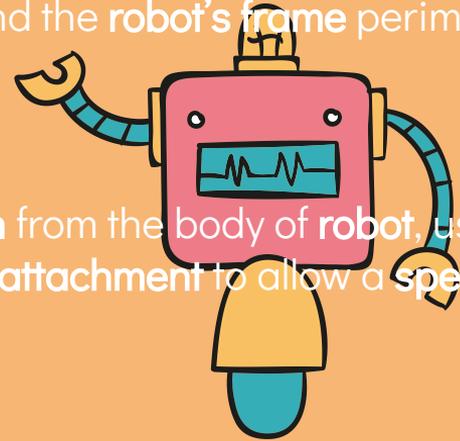
1. Build
2. Programming
3. Notebook
4. Awards
5. Closing + Q&A



Building

The build of the robot is one of the most important parts of the FIRST competition.

- There are hard limits
 - Your design **must** conform to the **rules and limits** set by FIRST. Competitors are **only allowed** a **specific number** of **motors** and **sensors**, and the **robot's frame** perimeter must **fit** within a **set area**.
- Quick and Easy access
 - The **attachments** must be **quick** to **attach and detach** from the body of robot, using **easy access** points on the body of the **robot** and the **attachment** to allow a **speedy change**.
- Time is of the essence
 - **Competitors** only get **90 seconds** to **complete** all the **challenges** on the board to **score** the most **points**, so **pit stops** and **attachment changes** need to be **quick!**





Building



- **Efficiency**
 - The design must be **efficient** in the task it has to complete. It must be built **effectively**, in good **timing**, and built to do the task.
- **Use time wisely**
 - You need to **identify** the task at hand, and build to complete the task. Still, there will most likely be **flaws**. Building quickly is important so you can find the **mistakes** and come up with **solutions quicker**.
- **Work Together!**
 - Being in **communication** with your teammates is one of the most important things. This is why the **Engineering Notebook** is so important. You have to be able to communicate and **explain your designs** so others can put in their **input**.

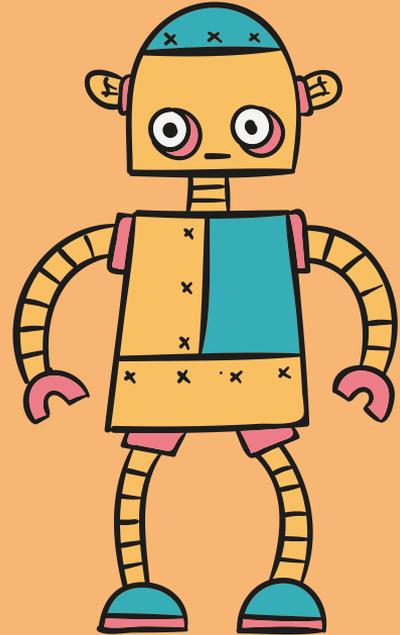


Programming

Programming is the process you take to bring your robot to life!

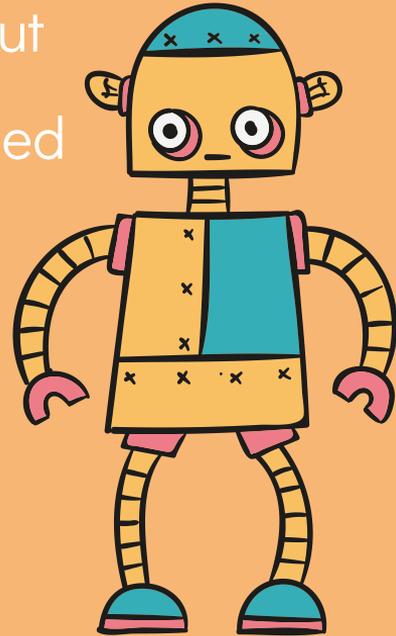
You do that by...

- ❑ Figuring out what you are coding your robot to do
- ❑ Design the program/ get an idea of how you want to make the code
- ❑ Make the program
- ❑ Download the code
- ❑ Test the program
- ❑ If you encounter problems, troubleshoot
- ❑ Test to make sure changes made work
- ❑ Your ready to go!



Programming Continued...

Programming is a key part in robot preparation. Without code, the robot would not be able to operate. If you need help, we have a resource sheet available for you!





Notebook



The Engineering notebook is a great way to record your team's journey through your FIRST LEGO League.

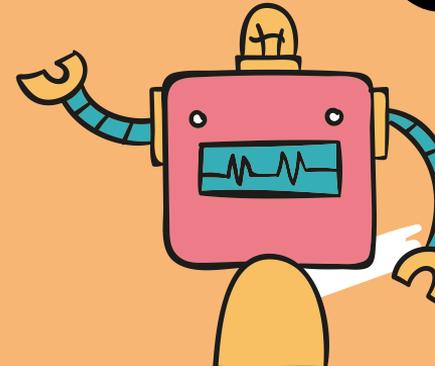
- ❑ Record the process of designing and building the robot
- ❑ Record your research, field trips and interviews, and testing your solution
- ❑ Record your outreach events, what you do during team meetings, and your even your future ideas



Notebook Continued...

What can be included?

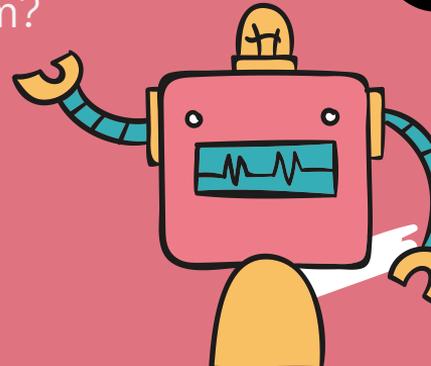
- Photographs and drawings
- LDD CAD drawings of your robot
- Plans for the season and tasks to complete
- Discussions & decisions during team meetings
- Robot and attachment designs ideas and tests
- Code printouts and pseudocode
- Problems you faced
- Improvements you made
- Ideas you have



Notebook Continued...

Possible questions to consider when making a notebook entry:

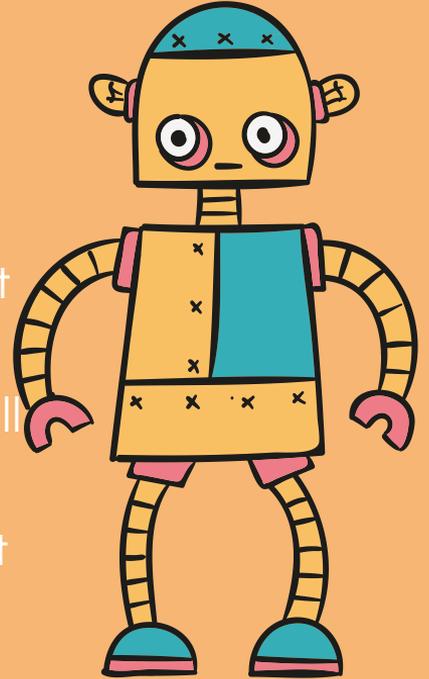
- What is the goal for today's meeting?
- What decisions were made today?
- Why did you make that choice?
- What did you try today?
- What worked, what did not work?
- When something didn't work, how did you solve the problem?
- What modifications are you planning on making next time?
- What are your next steps?



Awards

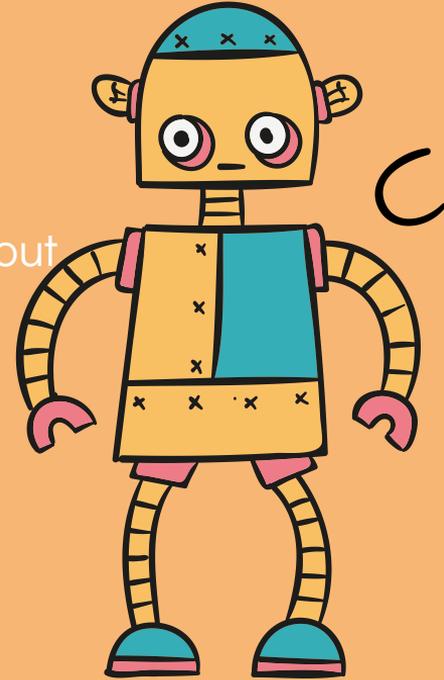
Optional

- Breakthrough - the team who makes the most progress and improves robot and shows core values
- Engineering excellence - recognizes the team that has the best robot design and shows innovation
- Rising all star - a team noticed by the judges and know they will do great in the future
- Motivate award- recognizes the team with the most team spirit towards others around them



Awards

- Engineering excellence - efficiently designed robot and good project brainstorm
- Robot design - good overall robot design and attachments
- Core values award - shows hard work and teamwork throughout the stations along with being nice and respectful to others
- Champions award- the team that displays all of the above awards
- Innovation - the team that wins the project with their solution
- Robot performance - the team that scores the most points



Closing + Q&A

Thank you so much for listening and coming to the event!

