

Team 0143 TJHSST Colonials

**Goals and Tasks for Botball 2019**

**Game Goals and Tasks**

1. Examine new challenges, new rules, and new parts, *1/25/19*:
  - a. Pull up and review PDF during Eighth Period, *1/25/19*
  - b. Explain rule changes and materials changes to team , *1/25/19*
2. Brainstorm Game Strategies and Building Plan, *1/27/19*
  - a. Discuss possible game strategies during Eighth Period and at-home meetings, *1/25/19*
  - b. Divide team into multiple build teams and programming teams to pursue each objective, *1/27/19*
  - c. Go over any issues that need be resolved, parts that need to be purchased, schedule conflicts that need to be acknowledged, *1/27/19*
  - d. Inventory all parts and sort them as necessary during at-home meetings, *1/27/19*
3. Build Practice Game Board, *2/2/19*
  - a. Team members and parent volunteer will buy supplies at Home Depot, *2/2/19*
  - b. Team will build the Game Board at designated team member's house with help of parent volunteer, *2/2/19*

**Robot Building Goals and Tasks**

1. Build Basic Structure of the Lego Robots, *2/9/19*
  - a. Attach motors to each chassis, *2/9/19*
  - b. Make first prototypes of each manipulator, just to see how to make it work and where to attach electronics, *2/16/19*
2. Complete Construction of People Lego Robot, *2/23/19*
  - a. Construct people collecting and grouping mechanisms, *2/23/19*
  - b. Attach manipulator firmly to Robot, *2/23/19*
  - c. Test design and make changes as needed in order to increase efficiency, *3/2/19*
3. Complete Construction of Water Lego Robot, *2/23/19*
  - a. Construct pom-collecting arm, *2/23/19*
  - b. Ensure that the manipulator can grab poms and water reclamation unit after placing poms in it. *2/23/19*
  - c. Ensure that sensors are precise and coded to make sure robot can travel to utility zone without sensing anything else, *3/2/19*

### **Programming Goals and Tasks**

1. Run Test Programs, *2/23/19*
  - a. Program wheel movement code and test it on the board, *2/23/19*
  - b. Ensure that all sensors work, *2/2/19*
2. Complete Programming for People Lego Robot, *3/2/16*
  - a. Plan out what needs to be coded with People Lego Robot Build team and assign sections to different members of the People Lego Robot Programming team, *2/2/19*
  - b. Program collection and deposit of people, *2/23/19*
  - c. Debug issues and improve efficiency and readability of code, *3/23/19*
  - d. Finish final testing and certify that code is competition ready, *3/30/19*
3. Complete Programming for Water Lego Robot, *3/2/19*
  - a. Plan out what needs to be coded with Water Lego Robot Build team and assign sections to different members of the Water Lego Robot Programming team, *3/5/19*
  - b. Program grabbing water poms and moving water reclamation unit, *2/23/19*
  - c. Debug issues and improve efficiency and readability of code, *3/23/19*
  - d. Finish final testing and certify that code is competition ready, *3/30/19*

### **Documentation Goals and Tasks**

1. Complete First Period Documentation: Project Plan, *1/30/19*
  - a. Confirm meeting times, deal with future scheduling conflicts, assign positions and tasks, and begin Project Plan document, *2/19/19*
  - b. Discuss with each build and programming team to establish the goals for each Robot and for each team, and create the final Project Plan document, *2/26/19*
2. Complete Second Period Documentation: Design and Code Documents, *2/27/19*
  - a. Have Robots functionally prototyped and have the build teams collect data and video footage, *3/3/16*
  - b. Choose which program segments to use and have the programming teams analyze the program segments before uploading to Github, *3/3/19*
  - c. Create the final documents by editing footage and , *3/7/19*
3. Complete Third Period Documentation: Lessons Learned and Survey, *4/3/19*
  - a. Make sure that every team member has completed the survey, *3/24/19*
  - b. Continue to update code on Github, *2/23-3/30/19*
  - c. Survey each team member about what lessons they learned from Botball, and decide on the most important lessons learned from this year's season, *3/28/19*

### Schedule Conflicts

1. INITE – For the first couple of weeks of build season, many of our members will be participating in the school-organized International Night, affectionately known as INITE. Due to practices and viewing the show itself, some of our members will be unable to attend some of the meetings. *Every weekend between 1/27/19 to 2/10/19*
2. FCPS Regional Science Fair – Some members are participating in the FCPS Regional Science Fair, and so will be unavailable during regular meeting times. *Between 3/17/19 to 3/19/19*
3. College Visits - As a couple of our senior members are High School Seniors, their weekends may be taken up by going out of city or even out of state in order to visit colleges or attend interviews. *Possibly any weekend between 1/27/19 to 4/6/19*

### Team Organization

#### Schedule

REGIONAL WORKSHOP: January 19 - 20

TOURNAMENT: April 6

#### January

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

#### February

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23

Region: Greater DC/Virginia

24	25	26	27	28		
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March

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

	Team meetings outside of school
	Team meetings during eighth period in school
	Workshop – <i>January 19 and 20</i>
	Tournament – <i>April 6</i>

Saturday Meetings: 3:00 PM to 6:30 PM

Sunday Meetings: 3:00 PM to 6:30 PM

Eighth period meetings: 3:20 PM to 4:00 PM

Region: Greater DC/Virginia

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### ***Division of Labor***

Adult Team Sponsor: Mr. Billington

**Student Team Leaders:** Rushil Joshi, Vishy Murthy

**People Robot Team:** Vishy Murthy, Dylan Kalten, Wayez Ahmed, Kirthi Kumar, Michelle Boisvert, Junho Lee, Aarushi Upadhyaya

**Water Robot Team:** Rushil Joshi, Bhanu Kumpati, Jack Blair, Amit Krishnaiyer, Joshua Lim, Samuel Esteban, Sylesh Suresh

**Programming Team:** Erick Tian, Sylesh Suresh, Vikrant Magadi

**Documentation:** Shreya Kurdukar, Sagar Saxena, Sylesh Suresh

### ***Conflict Resolution***

1. Team members will attempt to resolve the conflict themselves. They will then try to come to an agreement and make a compromise.
2. If the disagreeing team members do not come to an agreement, one of our team leaders, Rushil Joshi and Vishy Murthy, will discuss the problem with them and help them make a compromise
3. If our team leaders, Rushil Joshi and Vishy Murthy, is unable to help them come to an agreement, the disagreeing team members will discuss the problem with the adult volunteer, Mrs. Joshi, or the adult team sponsor, Mr. Billington, who will attempt to negotiate a compromise.
4. If the disagreeing team members are still unable to compromise, they will be separated from the same work group, and, as a last resort, dropped from the team.