8-bit Engineers (Catalyst Space) #664

Goals and Tasks for Botball 2019

Game Goals and Tasks

1.) Finish building the game board (January 28th)
    a.) Gather a list of supplies to buy (January 14th)
    b.) Cut PVC to the size required (January 21st)
    c.) Connect the PVC pipes and tape according to measurement (January 28th)
2.) Finalize game strategy (January 21st)
    a.) Have the team members join in on a conversation about all the possible ideas (January 14th)

b.) Identify any flaws (January 14th)
c.) Find possible solutions to determine a best plan (January 14th)
d.) Vote and/or ask questions (January 21st)

3.) Double check all the rules (January 14th)
a.) Read this year's given scenario (January 14th)
b.) Confirm the understanding of what's expected (January 14th)
c.) Examine specific procedures/steps to follow (January 14th)

Robot Building Goals and Tasks

1.) Decide on first designs (January 14th - January 21st)
a). Formulate designs based on game board (January 14th)
b.) Debate designs (January 14th)
c.) Decide on first designs for both robots (January 21st)
2.) Build first designs (January 21st - February 4th)
a). Split up into two teams, one for each robot (January 21st)
b). Address apparent issues with design (January 21st)
c). Submit design to software teams after building (February 4th)
3). Prepare robots for competition day (February 4 - March 27th)
a). Fix issues with robots reported by software team (February 4 - March 25th)
b). Final assessment and vote of legitimacy by entire team (March 25th)
c). Last minute changes if needed (March 27th)

Programming Goals and Tasks

1). Get the new coders accustomed to coding with basic robots (January 21st - February 4th)
   a). Present a basic tutorial on coding (January 21st)
   b). Get coders used to connecting to their robots(January 28th)
   c). Have coders try basic programs (January 28th - February 4th)
2). Testing/Identifying and Solving problems with Robots (February 11th - March 25th)
   a). Report glaring issues with first models to hardware team (February 11th)
   b). Continue working on robots (February 11th - March 18th)
   c). Keep hardware team up to date (February 11th- March 25th)
3). Final Testing Day (March 25th)
   a). Assemble the parents (March 25th)
   b). Run both robots for them (March 25th)
   c.) Address any final issues with robots if needed (March 25th - April 1st)

Documentation Goals and Tasks

1.) Submit Project Plan (February 5th)
   a.) Have team members check and double check each other's progress (January 21st)
   b.) Check the Botball website (January 28th)
   c.) Finalize the paper (January 30th)

2.) Submit Mechanical and Code Review (February 27th)
   a.) Jot down notes during each trial time (February 20th)
   b.) Gather data (February 26th)
   c.) Submit the form (February 27th)

3.) Submit Lessons Learned and Survey (April 3rd)
   a.) Gather to discuss how we grew as a team (April 3rd)

b.) Describe what we can work on next year (April 3rd)
c.) Confirm what is written before submitting the entry (April 3rd)

Schedule Conflicts

1.) We live in snowy Pennsylvania, so we have lots of bad weather and snow days. Club meetings may remain tentative depending on how the weather cooperates. Cancellations can be made every now and then.

2.) Some members of the Stem Squad are involved in more than one after-school activity (Ex: Forensics, wrestling, basketball, etc). Other activities may fall on the same day our club is being held in session. There are always possible times when one of us can't make it and be at two different places at once. Therefore, such team schedule and productivity may fluctuate based on everyone's convenience.

3.) At our school, we have major assessments scheduled for the spring. Such tests are as followed: The Keystone, SAT, and PSSA. At times, members might need the extra time to prepare for testing. The attendance at STEM might change.

Team Organization

1) Schedule
    a) Every Monday from 5:00 PM to 7:30 PM
    b) Plus additional working time outside the official club time

2) Division of Labor
    a) Software team - Codes the robots, minimum of four people.
    b) Hardware team - Builds and modifies the robots, minimum of four people.
    c) Management - Documents progress and coordinates the teams, one person.

d) Compliance Management - Makes sure all rules and regulations are being followed, one person.

3) Conflict Resolution

a) Everyone will share their opinion and the majority will determine what happens.