**Team Knowledge­­­­­­­­­­­­**

**Structure and Organization**

*Team Demographics*

* 10 people on team
  + 2 boys and 8 girls
  + two 11th graders; seven 8th graders; one 7th grader

*Process for Meeting*

* After-school program on Monday, Wednesday, and Thursday from 3:30 until 5:00
* Anyone who could come on weekends came for however long they could
* 45 minutes during study hall from Monday to Thursday
* Last week of Botball – stayed after school from 3:30 until 6 or later, in addition to study hall

*Organization of Team*

* Team leaders – kept on task. Also helped where help was needed
* Leader of coding + Leader of building
* The builders + coders
* Division of Labor
  + Divided into 2 sub groups that worked on different robots

**Teamwork**

*Decision Making Process*

* Gather together
* Write out ideas
* Write out pros and cons
* Figure out which were unrealistic

*Handling Conflict*

* Two builders were arguing over how to build so we separated conflicting persons (team members) and had them work on different robots seperately

*Goals- beginning and end*

* Beginning:
  + Sweepinator (create) - polyps
  + Manipulator- Get brain coral, Botguy and stack blocks (too much for 1 robot)
* End:
  + Sweepinator- polyps, bring fish farm, end on other side
  + Manipulator- Stacks blocks in MPA

*Division of Labor*

* Coders and builders
  + Each robot was assigned a group
    - Each person received a task and checked with the team leader when they were done

**Robot Design**

**Description of overall robot system**

*Overview*

* The manipulator has a pulley system for the arm. It drags a claw up and down, and grabs the blocks.

*Sensor Support*

* Camera, color sensor, optical range finder (E.T.)

*Effector support*

* The effector is a fork lift type system which has boxes in boxes which lifts up and then locks in place with the stops. It is directly mounted to the chassis plate.

*Testing*

* We wrote code, a segment at a time, and

*Code*

*Tough problem and explanation*

* Our most challenging problem was building an arm that worked. Most of the time the parallelogram-shaped arm toppled. But then we came up with the concentric box idea which put us back on track.

*Elegant solution*

* Our solution for the sweeper was to have a vacuum-type design and that did two things for us: it gave us a way to suck in and push out.