Aves Ablaze Judging Session Script

Adam: Hello, we are team 12056 Aves Ablaze from Sycamore High School. This is our first year as a team and we are so excited to be here at our first qualifying tournament. We are actually a first year club at Sycamore, which has allowed us to gather all of the best minds to come together to form our FTC team.

Aidan: So now I’m going to tell you a little bit about our robot while Rohan demonstrates some of our major features. Our major focus for our rookie season was to actually build a functioning robot, which we accomplished. We decided on a four wheel, car like robot with two driving motors in the back and two Omni wheels in the front for decreased friction when the robot turns.

Drew: From there, we decided to focus mainly on pushing beacons and shooting balls into the corner vortexes. Our simplest appendage is used to push the beacons and is simply a piece of metal protruding from the bottom of the robot with another flat piece that provides a wide surface area from which to push the beacons, allowing for a little bit of error on the part of the drivers.

Anu: Our next appendage is our most advanced, and serves the purpose of sucking in balls from the field and shooting them into the corner vortexes. It is made of two 3D printed gears that were designed on Inventor Professional, put on an axle with high strength rubber bands in between them. It is attached to a DC motor which spins the mechanism very fast, sucking in balls quickly and efficiently, and also shooting them with enough force for them to go uphill and into the targets.

Kevin: Finally, our last appendage serves the purpose of making sure the particles stay where we want them to and ensuring that they do not get stuck in the robot and are able to stay forward so that the autobroom is able to shoot them. It is fairly simple, just a servo attached to an arm that leads to a flat piece of metal which pushes the particles. It moves back, taking in particles before it pushes forward moving the balls into the autobroom where they are shot into the corner vortexes.

Jonah: Now I’m going to tell you a little bit about our programming. Although not ideal, we used FTC Blocks to program, which actually turned out much better than expected. We were able to program one controller to handle all driving functions and the other controller to handle all appendages. In terms of autonomous, our plan was to (finish this later with what we got done)

Rohan: Now I’m going to tell you about our process for the build. By the time our club was started, we got a solid base for the team, and our robot and controllers were ordered and delivered, it was already the beginning of October, so naturally we were very behind. However, we were able to work 3 days a week after school, and we got a lot done. Each meeting started with a quick overview of the day and our goals, and we also assigned a scribe for the engineering notebook at the beginning of the meeting. Then, everyone was assigned tasks to be completed. Generally, this worked fairly well and we got a lot done at each meeting.

Abhi: We also had great community outreach this year despite this being a rookie season due to how involved our district is in FIRST. In late August, we went to an FLL practice run event where we helped run the tables and scoring, helped navigate teams to where they needed to be, and did other miscellaneous things to help the competition run smoothly. Another great thing we did was demonstrate our robot to all of the FLL teams and explain what FTC was all about. We hope that this inspired them to possibly join Aves Ablaze when they get up to the high school.

Andrew: Now we would love to answer any questions that you might have.