Southwest Covenant Schools
Creators: Zack Dumas, Tanner Betts, & Aaron Bowman

The Aerial Gondola

This submission exhibits a clever machine we produced using a Botball kit from several years ago. We cleverly designed, built, and programmed an aerial gondola out of the old Botball CBC and pieces. This gondola is powered by one motor and a series of gears to run a wheel over a string we have running from one end of our Botball room to the other. The Gondola was designed, programmed, and created by Zack Dumas, Tanner Betts, and Aaron Bowman. The most important feature of this gondola is that it not only moves from point A to point B, but has sonars on its front and back to recognize when and which way to go. This robot uses math in the sense of its sonar timing and precision to control its movements. We chose sonars because simplify our programming. We managed to use sonars which where much more effective and took a lot less programming thus, "Keeping It Simple Stupid" (KISS). The Gondola is not the speediest autonomous robot in the world, but moves at a good, solid pace and works perfectly for what we use it for. The Gondola was not made out of necessity, but more of "laziness", as one might call it. We decided if we built this gondola we could send parts and notes back and forth across the room without having to get up. The Gondola has another attachment made for this job which is a second motor. This motor is used to raise and lower a basket that desired objects can be placed in for transport. We used this clever device to present to the eighth grade class at our school to try to draw them to a interest in possibly joining the Botball team. Our hope is that this will spark an interest in the under class men's minds, hopefully producing a good turnout for the team next year. We believe after our presentation to the eighth grade class they saw the use and fun of building and programming robots. Hopefully, they will want to pursue this in hopes of having the great feel of accomplishment that we did after a successful run with the Gondola. In conclusion of this paper, we would like to thank you for taking time to read this, and also say what a amazing program Botball is and what kind of impact it has had on our lives. We hope that our simple Aerial Gondola can provide others with ideas or as it does with us, just provide a simple smile.