Can You Recycle?

For the future invention challenge, team 1437 decided to create something children and adults of all ages can enjoy. With the ever growing green movement and the timeless tradition of throwing trash across the room to make a basket our robot can entertain for hours. The base of our robot is a simple chassis with four wheels controlled by four motors. On top of the chassis we attached a blue classroom recycling bin. In front of the blue recycling bin we created a large propeller controlled by a fifth motor. The blades of the propeller are large enough to block the top of the bin while in motion. All of the wiring is discretely tucked under the chassis and connected to a brain which reads the motors and sensors. In addition this trash-bot has a life of its own as it is fully autonomous. With the use of four touch sensors and two sonar sensors, the trash-bot can be turned on let loose in a room.

With this simple design comes a simple but highly amusing game that can be played by one, two, or three people or by a whole classroom. Each person gets paper balls in different colors, several VEX Tubes, and marbles. Then while the propeller is spinning and the robot is moving around the room each person tries to score as many objects as possible. Whether the robot is across the room for the traditional basket toss with a spin or is right next to the player, a challenge can be found. In addition to entertaining those shooting, the robot can also be controlled by a driver for an added challenge.

As a spin-off of the timeless trash throwing fun our trash-bot has provided the team with hours of fun trash throwing and recycling.