TEF Great Idea Grant Final Report

All Thompson Education Foundation (TEF) grant recipients must submit a final report to TEF by **May 31, 2026.** The final report is required. If you do not submit a final report for this grant by the due date, you will not be allowed to apply for future TEF grants.

Name: Ryan Stillahn
School: Thompson Valley High School
Project Name: Better Bin Project
Award Amount: $2,500.00

Objective of project as stated in the grant application:
The purpose of this grant project would be to enhance the appearance of our school, and to fulfill a rising need for new and better trash bins at the school's entrances. I recently found out from our custodial staff that the plastic roll away trash bins that are currently placed at our school's entrances will be permanently removed. This leaves our custodial crew and our school with a need for new trash receptacles. I am proposing that my Manufacturing 2 class of students begin producing 6 new and identical metal trash bins that will not only make throwing away their trash easier when entering the building, but will also allow us to enhance the curb appeal of our school. The students that would be working on the project would gain a great deal of skills in the process of making trash bins. The students would gain design and problem solving skills during the building process, they would gain critical thinking skills as they work through issues that would inevitably arise, and would get real world experience working in a group of their peers to reach the end goal.

1. Describe how you implemented your project.

I began this project by building a prototype "Better Bin" when I didn't have any distractions or students. I felt that having a working example was important for students to see what the end goal was for each bin to be built. I implemented the student work side after the initial prototype was finished by initially having my Manufacturing 2 class and its students working on fabricating them. I assigned each of the students a job that they were to complete. One was to cut the square tubing to length, another was to begin welding the square tubing together, and others were to start cutting out the sheet metal for the sides. Each of these jobs required some training for the students to complete them correctly. Measurements had to be exact in order for the parts to fit together correctly. Mistakes were made, but I feel that these are learning opportunities. I feel that the students in my Manufacturing 2 class

2. Please provide the results of your project. This information needs to correlate to the "measurements" provided on your original grant application. If you changed your measurements of success, please detail the reason for the change with your results.

The results of this project were pretty inline with what I had proposed. I feel that students were faced with adversity in the process of producing these trash bins. Their measurements and the cutting of material weren't always 100% accurate, and this forced them and myself to be creative with the material we had at hand. When we had a student cut several pieces of sheet metal to 26 7/8" long instead of 27 7/8" they had to problem solve what could be done with the miscut material. There were a broad range of suggestions given from throwing the old pieces away and getting more material to using the material to cut out triangles for the top. In the end we elected to use the material to make the doors since it was decided the extra gap at the top and bottom would help with the door opening and closing. I feel that the students gained insight into what it would be like working in a manufacturing facility building these items. Everyone had a job to do, and do it well or the rest of the team would not be able to complete their tasks. If the frame wasn't square the student welding in the body panels would have to take more time to custom fit the parts. The frame wouldn't be square if the square tubing wasn't cut to the correct length.

3. Did anything surprise you or your students during the implementation of your project?

I think that one of the most surprising things in this process was how well the students seemed to enjoy working together in a group instead of as just an individual. I thought about this observation for a while, and I feel that it is because they have someone to check their measurements before cutting the material, or they have someone else to make sure that the frame is square before welding it and moving on. If something isn't correct, and it happens, the students had someone else to shoulder the weight of the mistake.

My Manufacturing 2 class, where most of the work was completed, is comprised of almost all sophomores, but I did have one junior and one senior. I was surprised at the maturity level, and work ethic that I saw out of these older students. They took charge of their given job, and did it very well without any distractions. I enjoyed having both of them show this level of leadership and maturity in my class, and for the senior I know he will be moving on to do great things after graduation.

4. Please provide a copy of the final budget for the grant (you may attach a separate sheet of paper).

See attached spreadsheet.

5. Do you feel the project can be easily replicated in additional classrooms in Thompson School District, and, if so, is there any advice you can share?

I don't feel that this project could be replicated in another classroom very easily. If we ignore that these students are participating in some of the only welding courses offered by the district, I feel that it would take some creativity to find a project that encompasses so many different skills into one activity that took a couple of months to complete. These students honed their welding skills, proved that they can measure to the nearest 1/16", practiced math skills in figuring out the height of a triangle to fabricate the roof of the bin, and built a better foundation for team work as they built these projects.

Optional:
6. Comments for the grant committee or TEF board.

I really enjoyed being able to engage my students in this project. When I first approached them about the class having 6 trash bins to build, they were a bit apprehensive. It was obvious that the proposed project would take a massive amount of work both physically and logistically, but I assured them we would have fun. They even got a couple of pizzas out of me to reward them for their efforts to complete as many bins as possible before the end of the year. We almost reached our goal of completing 6 trash bins, but we ended up having 5 complete with one frame started and ready for the sheet metal sides.

Our custodian, Orlando Medina, decided it would be a nice touch to place a solar powered light that turns on when dark in the top of the bin so people could see them in the evening. That of course took a bit of extra effort, but I agree with him that it makes it look better.

One item that I overlooked was the painting of the trash bins. I am always focused on building the projects, but what happens when the projects are done? I think the trash bins will get a nice coat of paint over the summer and be placed at the entrances to our building before the beginning of the fall semester. I placed a trash bin at our end of the year celebration with a sign saying "Coming Soon Fall 2026" and the TVHS staffs' reaction was very positive.

I have enjoyed having the opportunity that TEF has given me to engage my students through the process of designing, and building these trash bins. It has made the end of the year go by so fast, and I feel the students that worked on them have something to show the world. They built these trash bins and they will be around for years to come.

Thank you.