

Shade Sail for Kids at the Endowment Center San Carlos

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Introduction

Our group was composed of biology students that broaden their horizons to think like architects and engineers, and act like carpenters. The idea for this shade project came after the realization that the beautiful butterfly garden and organic garden at the Endowment Center San Carlos, created by other students in our course, could not be peacefully enjoyed under the typical, burning South Texas weather. While spending time outside is essential, the sun can be damaging at peak times as well.

Objectives

Aimed to:

- create a simple, robust, and maintenance-free structure at an affordable cost
- provide a shaded area for children and adults that will protect them from the sun's heat and rays while waiting outside for transportation or enjoying the outdoors
- enhance our knowledge about sustainable development and community engagement

Development

Careful planning of the structure and use of materials was crucial for creating a lasting and safe project. We researched online and consulted with experts to get the best materials and devise the best layout. We calculated the length of wood, depth of the wood in the ground, and amount of concrete needed to have the wooden post safely secured in the ground. Before digging, our team analyzed the endowment center's outdoor blueprints to prevent damaging any pipes. We also reached out to a local welder to help us place metal rings on two existing metal fence columns to serve as anchor points for the shade sail. Lastly, we installed the shade sail and adjusted the tension with turnbuckles to be stiff enough to withstand strong winds and prevent water accumulation.



Result

The final result was a 173 square foot triangular sail suspended by a 16-foot post and two six-foot metal columns. The shade sail provides coverage to three picnic tables where the children or community members can enjoy the environment while being protected from the sun's harmful ultraviolet rays.

Conclusion

- ✓ The Rio Grande Valley is rooted in culture and community. Likely, many of the children at the endowment center in San Carlos will become future Vaqueros. By engaging and interacting with the community, we can lead by example and demonstrate the importance of supporting and improving our local communities.
- ✓ In addition to helping us understand and achieve our service-learning goals, our shade sail project will benefit the Endowment Center San Carlos for years to come.
- ✓ We recommend having more courses with a community engagement component.