



THE JOYS OF TINKERING

Wheelie Car Competition Helps Develop Future Engineers

Call it a generation gap. Kids today know very little of the joys of tinkering. “Sure, they know how to wiggle their thumbs with the latest Wii game,” says Julian Pate III, director of education at Focus: HOPE, a renowned civil and human rights organization located in Detroit. “But many don’t know the joys of building something from scratch in the basement with your father or uncle like we did growing up. We’re trying to put some excitement back into using your hands.”

With funding provided by the SME Education Foundation, a team of 8th graders from Robeson Academy on Detroit’s West side participated in an engineering project earlier this summer to build electric wheelie cars. The Shop Rat Foundation, a Jackson, Michigan-based nonprofit educational institution, loaned the Robeson Academy two wheelie car kits for this seven-week program.

“Hope for tomorrow starts with hands-on projects today. That’s how I think we feel about the program,” says Chris Salow, founder and executive director of the Shop Rat Foundation. “We want to encourage everyone to become involved and donate to their local school efforts. We realize the need to intellectually challenge kids at a young age.”

The electric wheelie cars featured

alternative energy, zero-turn steering, electric motors and dynamic braking. Students had full access to blueprints, the complete frame package, the electrical system, the wheel/axle/tire assembly and other components. They assembled the cars over a seven-week period with mentoring assistance from five engineering students from Focus: HOPE as well as access to the organization’s engineering/manufacturing training facility.

While the students learned a great deal of manufacturing and engineering during the seven-week program, the biggest payoff took place in June at the Michigan International Speedway in Brooklyn, Michigan.

“Our students were not told at the beginning of the project that the two teams would be racing the wheelie cars against each other in the shadow of the grandstands at the Michigan International Speedway,” Pate says. “Here they were with NASCAR fans stopping by to watch and cheer them on. It was a once-in-a-lifetime opportunity to stand out on the race track with the big boys.”

If there were any nerves or signs of fear, Pate says the students played

it cool during the race. “These are 8th graders, so it was really no big deal to them. They were urging their teammates on during the competition and really wanted to win. It was great to see this progression from assembling the car kit in the classroom to crossing the finish line at the race track.”

Earlier in the year, *Education Week* magazine had graded Michigan K-12 education a “D” due to a litany of issues. Collaborations between the SME Education Foundation, the Shop Rat Foundation and Focus: HOPE aim to challenge assessments like this.

“These kids enjoyed the process, start to finish. They built the cars, they had an opportunity to race the cars on a professional track and they had a once-in-a-lifetime experience. It carries a strong message in this city...working together for the common good,” Pate says.

The organizations will continue to work together on engineering and manufacturing initiatives in the future.

For more information visit, www.shoprat.org, www.smeef.org or www.focushope.edu.