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Grafton High School students put their handiwork to the test at Road America with a race car they designed and built

It's not often that students get to take their work to a race track, but Grafton High School teacher Mike Dodge gave them the chance this spring.

ERIC MOEGENBERG sat behind the wheel of a replica race car he helped design and build along with fellow Grafton High School students (clockwise from lower left) Alex Conrad, Andy Waterman, Mark Yerkes, Kurt Brueggemann and Mike Tiegs. Photo by Sam Arendt

Members of Dodge's welding and independent-study classes spent seven months building a replica race car as part of the Wisconsin Formula High School: Racing to Learn program, a venture that culminated in the testing of vehicles at Road America near Elkhart Lake.

The 3-year-old program, which was developed by two Green Bay instructors, teaches students engineering, manufacturing and marketing skills, as well as problem solving and teamwork.

In early May, 15 fiberglass karts from nine Wisconsin schools and one school in Indiana were brought to the track, where students set up makeshift pit crews and put their vehicles through

their paces. The top speed reached by the cars, which are underpowered by design, was about 45 mph.

Although Grafton students were participating in the project for the first time and had trouble getting their car started, they eventually worked out the bugs — and put in plenty of time behind the wheel.

“It was a great experience,” said Dodge, who decided to get his students involved after learning about the program last year. “Getting the car on the track was nice, but the main emphasis is to construct the car and teach the students a variety of skills.

“It’s a good program because it combines academics with a hands-on project, and they get to drive their own car. The welding and fabrication skills needed fit well with my classes.”

Most of the work on Grafton’s vehicle was done by six students — seniors Eric Moegenburg, Andrew Waterman and Kurt Brueggemann, juniors Mark Tiegs and Mark Yerkes and sophomore Alex Conrad. Besides working on the car in classes, students regularly put in time after school, Dodge said.

Under project guidelines, students use computer software to match the design of their car’s cockpit to a 3D model they are provided. They design and build the rest of the car, completing all necessary metal cutting, welding and painting.

Briggs & Stratton donated 16-horsepower engines, and Road America provided free track time. However, student teams had to raise at least $3,000 by soliciting sponsors to pay for parts.

Grafton students did most of the work recruiting sponsors, Dodge said. Contributing to their project were Grob Inc., MGS Manufacturing Group, Neuens Lumber, Arz Machining, the Rods-N-Relics Car Club, Lauer Equipment Sales, Studelska Chiropractic, Heinz & Sons 57 Auto Body, Specialty Engines and a donation in memory of Edwin Gabrielse, Brueggemann’s grandfather.

Dodge said the success of the inaugural project has already inspired plans for next year.

“Now that we’ve built the car, I think we can build another one a lot faster,” he said. “I would like to build two cars next year.”

Dodge said this year’s vehicle will be displayed at the Rods-N-Relics car show in June and then used as a learning tool for building future vehicles. He plans to have students rebuild the frame, steering and engine mounts and reuse the tires and other expensive parts.