

Off to the Races: GEAR UP Students Compete in Mountain West Grand Prix

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An Edith Bowen Laboratory School student lines up on the racetrack in a student-built electric vehicle.

Teams of students from across the state gathered at the Utah Motorsports Campus in Erda, Utah to race electric vehicles in the seventh annual Mountain West Grand Prix in late April.

This year's race saw 21 teams from 13 schools compete in elementary, middle, and high school divisions with single-seat electric vehicles assembled using kits from [GreenpowerUSA](#). While some teams' cars were modified from races in previous years, many teams were at the track for the first time with a brand new build. Whether or not they'd competed before, all students shared the same palpable excitement of watching something they built with their own hands speeding down a real racetrack.

The Grand Prix was established in 2015 by USU's Gaining Early Awareness and Readiness for Undergraduate Programs ([GEAR UP](#)) grant program, and students from GEAR UP schools account for many of the teams who compete year to year. The races continue to be powerful learning experiences for students in every age range as they work as teams to design, build, and test their vehicles with help from teachers and mentors. This project-based approach leads students to apply their knowledge of science, technology, engineering, and math (STEM) to improve and solve challenges with their cars, creating valuable opportunities for students to foster new interests and explore potential future careers.

Stuart Baggaley, a teacher at Edith Bowen Laboratory School, is one of the advisors for the school's Greenpower

teams. According to Baggaley, while the teachers are there to guide and assist, the students do most of the work. "I love seeing the kids become completely autonomous," he said. "Once they figure all the moving pieces out, they come together and function as a cooperative team."

Since schools rarely have access to manufacturing facilities and all the necessary materials to assemble the body of an electric car, the teams often seek partnership with local businesses and run fundraisers to support the completion of their vehicles. Students also have to coordinate roles within the team to ensure that the race itself goes as smoothly as possible, which can serve as an important lesson in teamwork.

"With our kids, the biggest obstacle is finding a role that fits them and encourage them to do their best to help the team," said Baggaley. "All the students really want to be the driver, but sometimes they come to realize that they can help their team more by being a pusher and catcher. They learn that they can be more successful when they try to make their team successful."

Baggaley said that these cooperative social skills are just as important as the STEM skills students develop as they prepare for the races—maybe even more so.

"Since 2020 and the COVID pandemic, we decided that we would use the Greenpower cars to help students reconnect and foster teamwork and selflessness," said Baggaley. "Teaching the kids to help their teammates and work towards a common goal has a huge impact on each student."

In this year's races, electric vehicles from EBLS took first and second place in the elementary school division and second and third place in the middle school division. With such success both on the racetrack and in the classroom, Baggaley predicts a long and fulfilling future for the program.

"I see the Greenpower program continuing to help our student develop selflessness, positive identities, teamwork, and feeling of completing a difficult task," he said.

The USU STARS! GEAR UP program is part of the Center for the School of the Future in the Emma Eccles Jones College of Education and Human Services at USU. GEAR UP is a national, federally funded pre-collegiate grant program that is designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education.