Results

Student Impact 2012-2013

In terms of impact, we predict this year the program will reach:

- 260 core participants
- 50 summer program participants
- 1,502 students in the classrooms of participating K-12 teachers

A total of 1,812 students will be impacted by the after school program curricula.

The program will operate with:

- 73 transportation-related lesson plans in an ever-growing repository
- 13 teacher partners at K-12 sites
- 16 undergraduate and graduate student mentors

These figures will continue to grow as the program expands to new sites.

Participant Comments

Sometimes the numbers speak for themselves, but Roads, Rails and Race Cars also functions on a very personal level, building relationships among students, teachers, industry partners, and university mentors.

“Being a mentor for Roads, Rails and Race Cars has given me the opportunity to share my experience and knowledge with the next generation of students. And the club is great practice for presenting to the general public. Not many people can ask in-your-face questions like middle school students can!”

-Scott Sorensen, Mentor

“The program has changed what I thought about science and math because it makes me think more about engineering and what the field really requires.”

-Zach Harris, Middle School Student

“In our competitive society it is important for students to not only receive a solid education, but to work with someone who builds hope for their future. That is why collaboration with the UNL graduate and undergraduate students, as well as community members, is exciting, meaningful, and rewarding. Being a teacher for RRRC is the best part of my day.”

-Mary Herrington, Teacher

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MATC educational programs have been successful because of their ability to bridge various groups: industry, academia, education, and the community itself. Roads, Rails and Race Cars has embraced the generous support from organizations and individuals throughout the community, and these relationships have shaped the experience for every student in the after school clubs.

MATC—and the Nebraska Department of Education—would like to recognize its partners in this endeavor:

- Center for Research on Children, Youth, Families & Schools
- Faubel Financial Services
- Flatbed Express
- Lincoln Community Learning Centers
- Lincoln Public Schools
- Metropolitan Community College
- Nebraska Department of Roads
- Nebraska Transportation Center
- Nebraska Children & Families Foundation
- Nebraska Trucking Association
- Southeast Community College
- University of Nebraska–Lincoln

Each after school club hosts 10-20 students at every weekly session. During each meeting, teachers and mentors lead students in interactive and informative activities about transportation.

The curriculum of the program is developed by mentors with guidance from lessons created during the Summer Institute. At the annual Summer Institute, teachers create STEM-related lesson plans with guidance from engineering and logistic faculty at UNL.

These lessons demonstrate transportation in action, through a variety of activities, such as:

- Building penny barges to learn about freight transportation
- Creating pudding embankments and watching the effects of milk “flooding”
- Constructing bridges and conducting strength tests
- Digging tunnels through clay mountains to determine the most effective tunnel structures
- Crashing toy cars and measuring the impact to learn about crash barriers
- Observing walking, running and skipping speeds; then using LIDAR guns to calculate speed and velocity

The final component of Roads, Rails and Race Cars is in the students’ hands: participants themselves present a topic at a celebration with their parents and community members at the end of the program. This showcase allows students to communicate about what they have learned and how they can apply it to real-world transportation problems.

In addition, each summer, MATC invites students to participate in a summer intensive experience. This 2-day session gives students further access to interactive transportation learning, by touring additional lab facilities at UNL and meeting industry partners as well as visiting their respective sites.