

## Transportation Youth Academy

**Overview** In 2016, The Transportation Workforce Institute (TWI) and Advanced Transportation and Manufacturing Pathway at Los Angeles Trade-Technical College (LATTTC) developed and launched the Transportation Youth Academy. The overall intent of the academy is to increase high school students' awareness and understanding of the transportation industry and career opportunities while gaining fundamental technical and teamwork skills. Academy activities and projects are designed to be replicable and incorporate engaging videos, content, and "hands-on" activities. The activities and projects are also designed to be offered in an intensive 5-week format (over the summer, for example). However, the curriculum is modularized into discrete activities and projects that can be organized to fit any configuration and schedule and may be stretched/augmented and conducted over an entire quarter, semester, or longer.

### Academy Activities and Projects

- *Exploring the U.S. transportation system and careers.* Students were taken on a journey across the country to discover how the U.S. transportation system works, including a "behind the scenes" look at the modes of transportation, components, careers, infrastructure, and issues of the aging system that cannot keep pace with a growing U.S. population.
- *Assessing career interests and discovering transportation careers matching those interests.* Students completed a career interest profile and explored career opportunities in Transportation ranging from those that plan and design transportation systems and vehicles, to those that keep the system and vehicles in good working order. They discovered careers in transportation that matched their interests and that provide good pay and advancement opportunities, are here to stay, and are becoming more "high-tech" as transportation becomes "smarter". They also discovered these careers provide a rewarding opportunity to be part of building their community's future.
- *Designing, constructing, and manufacturing a working monorail transportation system--including a rail vehicle.* In this activity, students learned and applied skills in automotive technologies, electronics, welding, and computer numerical control manufacturing to design, build, and operate a monorail system and its components.
- *Researching and recommending routes for the monorail system in Los Angeles, CA.* In this activity, students researched and recommended potential routes for a monorail system with the goal of enhancing local and regional connectivity to meet current and future transit demand based on projected population and transportation growth in the greater Los Angeles region.
- *Designing monorail system routes using Geographic Information Systems (GIS).* In this activity students learn to use Geographic Information Systems (GIS) to recommend potential routes for a new monorail system in Los Angeles, California to meet one or more of the following goals:
  - a. Alleviate current traffic/transportation congestion, bottle-necks/traffic jams, safety issues, and increase overall mobility.
  - b. Increase quality of life in the region by increasing transportation to places people frequently go for entertainment, health, food, education, etc.



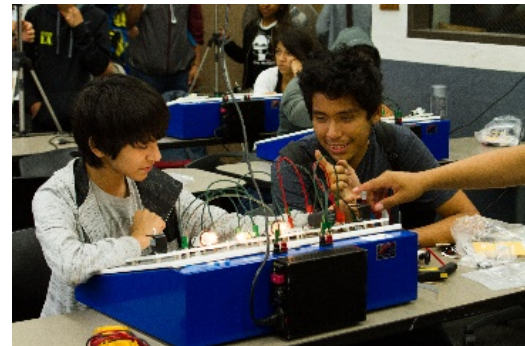
- c. Increase transportation services for business, commerce, and people commuting to work.
- d. Provide better transportation access/services to low-income, elderly, and vulnerable populations.

Students also conduct a mock, real-life project where they imagine they are preparing a plan to present to a regional transportation board.

- *Developing a marketing campaign for the monorail system.* Students became a member of a team that had been hired to develop a marketing campaign and materials for a new monorail system in Los Angeles. The campaign and marketing activities included naming the monorail system, promoting the system through vivid language that will attract riders, developing supplemental materials for riders to see and read while waiting at monorail stations, and creating exhibits and displays that will attract people to ride the monorail system.

**Outcomes** Students who have attended the academy and participated in an evaluation (93%) indicated because of their participation:

- 100% know a little (23%) or a lot (77%) more about the transportation industry
- 100% know a little (31%) or a lot (69%) more about jobs that exist in the transportation industry
- 82% think a career in the transportation industry would be a little (53%) or a lot (29%) more appealing
- 79% think they may consider having a career in the transportation industry a little (46%) or a lot (33%) more; the remaining students (11%) indicate they are considering a transportation career about the same as they did before the academy



Students indicate what they like most about the academy are the hands-on experiences with tools and materials, the fact they explore multiple aspects of the industry, working as a group to achieve a common goal, and researching careers and thinking about their future. 93% of students rate their experience in the academy as a 8, 9, or 10 on a scale of 1 to 10 (1 = poor and 10 = excellent) and 93% indicate they would recommend the Transportation Academy to other high school students.

## Future Activities



TWI and LATTC are working to expand resources available for similar youth academies and to extend the program to additional high schools throughout the Los Angeles region. Student activities are available on the Advanced Transportation and Manufacturing Pathway website at: [pathways.lattc.edu/futureready/](http://pathways.lattc.edu/futureready/).

Instructor guides, materials, and additional resources are available on the Transportation Workforce Institute website at: [twi.lattc.edu/tya/](http://twi.lattc.edu/tya/).