



The *TranLIVE Spotlight* is a bi-weekly update from the University Transportation Center research collaboration led by the University of Idaho

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SUSTAINABLE TRANSPORTATION: TECHNOLOGY, ENGINEERING, AND SCIENCE SUMMER CAMP INSTRUCTORS GUIDE

MOSCOW, Idaho – Researchers at the University of Idaho have developed a comprehensive instructor’s guide intended for a ten day summer camp focused on sustainable transportation. Having been implemented during the summer of 2013 as part of the STEM Access Upward Bound TRIO project, the instructors guide has been useful in giving high school aged students access to hands on and career oriented experience in an interesting and beneficial manner.

The project serves high school students (aged 14-18) who are from low-income, first college generation backgrounds and brings them together every summer to work on different STEM research projects in order to get hands-on interaction at various field sites and job settings. This particular guide splits the 10-day period into three units. The first three days are part of the Vehicle Technology unit, covering topics from vehicle dynamics, engine design, and emissions. The next four days are dedicated to the Traffic Engineering and Operations unit, where students are tasked with learning about vehicle detection, coordinated intersections, traffic safety, and geometric highway design. The last three days are focused on the Transportation Science and Planning unit. Topics covered during these days include traffic forecasting, bicycle and pedestrian planning, and public transportation.

The innovative lesson delivery challenges students to consider real-world variables that field study requires, as well as work through solutions using those variables. Examples include working with actual engines, identifying the parts and understanding the combustion process to the development of efficient intersections and highway designs.

Overall researchers found deployment of the instructor guide to be successful in improving student understanding of traffic conditions and could be further improved to benefit a wider range of students in future.

The complete report is available at: bit.ly/tranlive110314

ABOUT TRANLIVE UNIVERSITY TRANSPORTATION CENTER

TranLIVE is the Transportation for Livability by Integrating Vehicles and the Environment a research collaboration lead by the University of Idaho in partnership with Old Dominion University, Syracuse University, Texas Southern University, and Virginia Polytechnic Institute and State University. TranLIVE works to find solutions to transportation challenges that minimize environmental impacts while educating students to enter the transportation workforce and creating and transferring tools and knowledge to practicing transportation professionals. TranLIVE is sponsored by the United States Department of Transportation (USDOT) University Transportation Centers Program. For more information visit: www.tranliveutc.org