



ECO₂school Program Impact, 2013-2014



ECO₂school develops high school leaders who promote active transportation to their peers to reduce emissions and achieve long-term personal, community, and environmental health.

Results

Every week during the ECO₂school Challenge:

- **23,443 fewer miles were driven**
- **17,845 fewer pounds of CO₂ were emitted**
- **1,105 fewer gallons of gas were consumed, thus saving \$4,368**

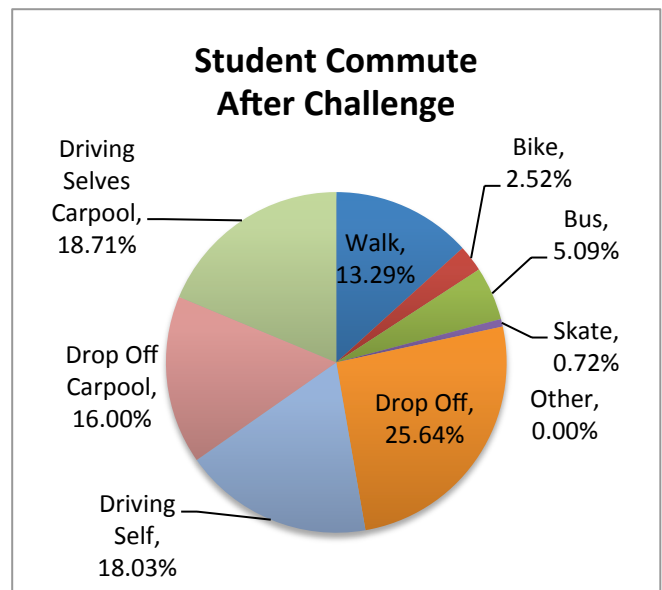
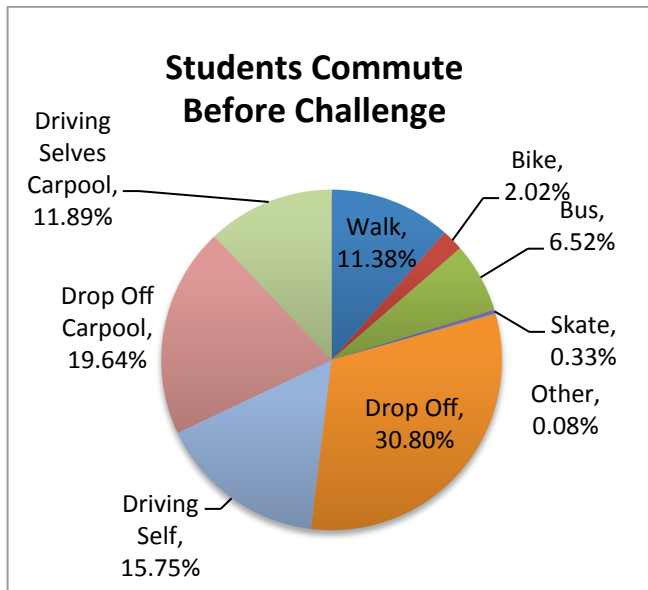
Program

Throughout the 2013-2014 school year, ECO₂school leaders organized events and presentations, including the ECO₂school Challenge in the spring, to encourage peers to use alternative modes of transportation for their school commute. We were in 11 schools. Our education program reached 9,262 students of which 1,998 participated in at least one behavior change action. 33 students worked with us in their clubs organizing and implementing actions on their campuses.

Survey methodology

ECO₂school student leaders surveyed peers from seven high schools who participated in ECO₂school during the 2013-2014 school year. They asked about their school commutes as well as for their feedback regarding ECO₂school. Of a total student population of 8,718 in the seven schools, 1,003 students were surveyed in the fall before the Challenge, and 861 students were surveyed in the spring after the Challenge, for a combined 10% representative sample. Results are based on extrapolated results from the survey sample to all students at all seven schools.

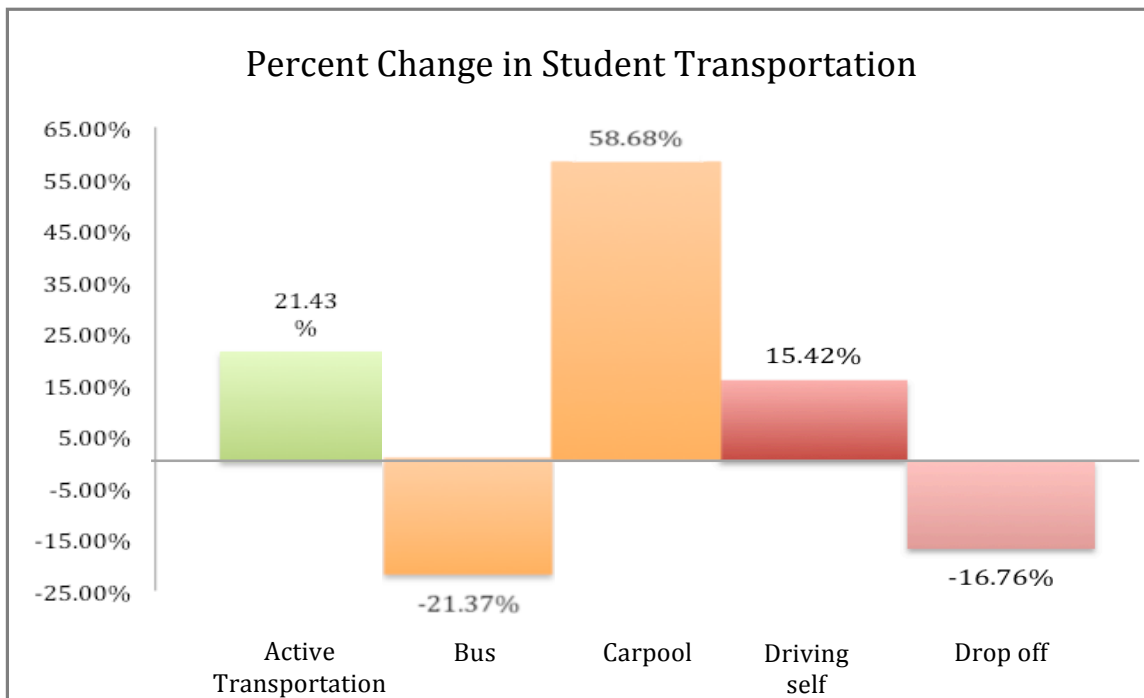
Students provided home addresses or nearby cross streets to help determine the miles traveled during their school commute. They also provided information about their transportation methods in a five-day school week, 10 one-way trips to and from school. Utilizing the provided information, the approximate pounds of CO₂ emitted for each surveyed student during those ten trips were calculated. The representative samples of student responses from each school were extrapolated to reflect the entire student body at each individual school. When the adjusted data from the fall and spring are compared, they show that students increased their use of alternative and active modes of transportation, resulting in a 7% reduction in vehicle miles traveled (VMT), carbon dioxide (CO₂) emissions, and gas consumption. The graphs below compare student commutes before and after the ECO₂school Challenge.



Changes in students' commutes

Extrapolated data were used to assess the percent change of students' transportation modes during the school year. As shown in the graph above, drop offs by carpool decreased by 17% during the school year, while students driving by themselves increased by 15%. However, students also showed a 59% increase in students driving themselves carpooling, indicating that although students are still driving, they are carpooling more.

Overall, students' use of active transportation to get to and from school increased after the ECO₂school Challenge. Although a 21% decrease was seen in the number of trips taken by bus, a 21% increase was also seen in active transportation. Overall, students' use of active and alternative modes of transportation increased. Students' participation in and exposure to the ECO₂school program positively impacts students' transportation choices, which in turn results in emission reductions in Sonoma County.



Students' reasons for changing modes of commuting

Students who reduced the number of times that they drove to school were asked what influenced them to change. Students rated being more aware of climate change and wanting to make greener choices at 2.87, on a scale of 1 to 4. Being more aware of the health aspects of walking and biking, as well as more confident when walking and biking, followed close with ratings of 2.64 and 2.11 respectively. Competing in a contest for prizes received the lowest rating at 2.0. Understanding the impact of their actions motivated students to use active and alternative modes of transportation, which is the goal of ECO₂school leaders across Sonoma County.

Student participation in and views of program components

As part of the survey, students who participated in ECO₂school activities rated them on a scale of 1 to 5. The highest student participation occurred during presentations such as the Alliance for Climate Education (ACE) assembly, where 13.57% of students surveyed reported attending. The ACE assembly was given an average rating of 3.32. Other presentations attended included the "Share the Road" presentation with an 11.38% attendance and 3.37 rating, followed by the ECO₂school Climate Literacy presentation with an 8.28% attendance and a 3.57 rating. In addition, students also participated in events geared to engage the student body during the spring's ECO₂school Challenge. Of these events, the most attended was the Bike Blender with 9.58% of students participating and an average rating of 3.45. Slow Races had 7.58% participating and a 3.03 rating. Interestingly, the community rides had the least participants at 3.69%, but they received the highest rating from students who participated: 3.54.

Student leadership

ECO₂school leaders are winning awards and scholarships for their work and embarking on educational and professional careers with an environmental focus.

- County Board of Supervisors Gold Resolution for ECO₂school
- Winner Clean Air Award from Breathe CA.
- Youth Presenters at the National Safe Routes Conference
- Youth Keynote Speaker Youth Environment and Sustainability Conference
- Youth Presenters at the Youth Environment and Sustainability Conference
- Press Democrat Teen Life <http://www.pressdemocrat.com/article/20140615/lifestyle/140619696>
- Green Living Student Film Project Winner <https://vimeo.com/album/2919991/video/98382649>

In addition the Center for Climate Protection has established a Youth Advisory Board to engage students in the larger community.

