

The John Ernest Foundation

YES

Youth Environmental Scholarship

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Abstract:

Minimizing the effects of climate change by reducing American energy use is a global issue that can be addressed on the community level by individuals. The purpose of LAHScarbon.com is to numerically show the students of Los Altos High School the impact their transportation choice to and from the high school has on the LAHS community's carbon footprint. The premise is that once the students realize how much their individual choice can make a difference, they will choose more eco friendly transportation options.

Background:

Climate change is a major crisis facing my generation. Carbon dioxide pollution has been tied to climate change and changing weather patterns.¹ The number of cars directly impacts the amount of carbon dioxide in the air so the more cars, the more carbon dioxide which means greater climate change. California contributes a substantial amount of emissions because of its large and growing population (expected to grow from 38 million to over 50 million in the next 20 years²) and the related increase in cars and new drivers. The community of Los Altos is part of the problem because there are no neighborhood school buses in

¹ http://www.ucsusa.org/global_warming/science_and_impacts/science/hurricanes-and-climate-change.html

² <http://www.washingtonpost.com/wp-dyn/content/article/2008/09/06/AR2008090602744.html>

our town. Parents drive their children to and from school because of lack of funding due to Proposition 13³. Also, Los Altos has a wealthy population, so it is not unusual for a family to have three, four or even more cars, all adding to carbon dioxide emissions and contributing to climate change.

Discussion:

So what can be done to help solve the situation? I can't change the world's driving habits, but can make a difference on a local level by informing my classmates about the impact of their actions. When the students at Los Altos High realize the impact that their transportation choices to and from school have on our community's carbon footprint, they will think twice before driving the short distance to school.

My website www.LAHScarbon.com lets a student input the miles he/she drives and the gas mileage of the car. This information is used to calculate the effect on the bottom line of the school's carbon footprint. The student can see the immediate difference that walking, riding a bike or carpooling will have on the overall school footprint. Furthermore, the student has the option to calculate approximately how much carbon his family emits every year through driving. The student will realize that reducing his number of miles driven in a year will have a huge impact on the amount of carbon that is emitted in the air and so will more seriously consider eco friendly options to go to and from school. A link to a government website on fuel economy at the bottom of LAHScarbon.com reinforces the point that each gallon saved impacts our community and world. One gallon of gasoline equates to almost 20 pounds of carbon dioxide.⁴ The student's carbon footprint

³ <http://www.paloaltoonline.com/square/index.php?i=3&d=&t=1365>

⁴ <http://www.fueleconomy.gov/Feg/co2.shtml>

can be reduced further by driving smoothly. Speeding, rapid acceleration and constant braking can reduce a car's gas mileage by as much as 33% on the highway and 5% in town.⁵

LAHScarbon.com is scalable and not restricted to Los Altos High School students. The source code is readily available to students of other schools (via "View source") who can make a few quick changes so that the website is more appropriate for their communities. In this way, it may be possible to educate the students of Mountain View, Gunn, and Palo Alto, and then even expand to include the larger Bay Area, the United States, and maybe even the world.

Conclusion:

I can't solve the devastating effects of climate change by myself, but can be part of the solution by helping to supply information so that more people can make better decisions. My website enables students to see the concrete and immediate difference that each gallon of gas saved can make on our community, country and the world. Each of us can reduce our carbon foot print. Our individual contributions add up, and together we can change the world.

⁵ <http://www.fueleconomy.gov/feg/driveHabits.shtml>