

# Campus commutes calculated

## Most junior high students walk, bike or ride the bus

ENTERPRISE STAFF

A UC Davis group has released the results of a competition between Davis junior high schools, which urged students to reduce their carbon footprint by biking and walking to campus more often. The May contest followed workshops about global warming.

The workshops and contest were presented by the UCD-based Kearney Foundation of Soil Science along with UCD students, faculty and staff across a wide range of disciplines.

Kate Scow, a leader of the UCD group, reported that although the challenge initially was envisioned as a competition to determine which school could most reduce greenhouse gas emissions associated with commuting, the differences were not significant enough to declare a winner.

Scow said the lack of a winning school is primarily due to three reasons. First, the pre-workshop measurements were not extensive enough to establish a representative set of baseline data. Second, the schedule at the end of the school year was less predictable — field trips, for example — which affected attendance. And third, determination of significant differences between the schools required collection of a larger number of samples than originally planned.

However, monitoring student transportation choices produced an interesting set of data.

The three schools were relatively similar, with 37 to 46 percent of stu-



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In junior high, students are given more independence to walk and ride to school themselves. Joey Flory, pointing, Emma Spinks, center, and Amanda Cormier, on bike, head home from Holmes Junior High after school in May 2006.

dents riding bikes, 33 to 41 percent commuting by vehicle, and the remaining 19 to 29 percent coming to school on foot or by other means. All schools had a similar proportion of commuters who were single riders in vehicles (26 to 27 percent).

Although differences between schools were small, certain trends were evident. Harper Junior High School had the highest proportion of car poolers (33 percent), including bus riders, among students commuting by vehicle. That's compared to about 20 percent at the other schools.

Holmes Junior High School had the highest proportion of bikers (46

percent) throughout the challenge. Harper showed the largest increase in number of bikers during the challenge. Emerson appeared to have had the highest percentage of students coming on foot.

The carbon footprint of commuting by vehicle to school also was estimated. Based on the average travel distance to school, idle times and the types of cars dropping students off at schools, the UCD group calculated the average emissions from driving a student to school every day to be about 70 pounds of carbon dioxide per month (in a car) or 82 pounds of carbon dioxide per month (in an SUV, van or truck).

Based on these numbers, the group estimates that a combined total of 404 tons of carbon dioxide per year is produced by vehicle commutes to the three schools. That assumes two trips per day and 180 school days.

Scow said all schools have the potential to decrease their dependence on vehicles for commuting. Successful programs can be found in Odense, Denmark, where campaigns to reduce automobile use have led to a 13 percent increase in daily bicycle commuting since 1999, Scow noted. Both Paris and Amsterdam have

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### Tips for cutting carbon footprint

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active programs promoting biking and walking that are tied to health benefits and greenhouse gas reductions, she said.

Certain constraints, however, must be considered in planning programs to promote biking and walking to schools, she said.

Holmes is the most central campus in town, with no major barriers to commuting by bike or foot. However, Harper is on the outskirts of Davis, surrounded by agricultural fields on two sides, which presents a longer commute for some of its students, especially those who live in South Davis.

Some students have after-school activities far from campus, requiring vehicle transport. Scow said schools could help by facilitating car pooling or buses. Parents could help by encouraging biking to closer locations or arranging car pools for after-school events. The city of Davis could help by further promoting safe routes to school and ensuring bike and pedestrian safety and traffic calming in areas of high traffic, Scow notes.

The UCD group will make its global warming teaching information publicly available online at [www.climatechangeeducation.org](http://www.climatechangeeducation.org), a Web site devoted to climate change education. The workshop was recently presented to a visiting Girl Scout troop from Sonoma County and there are tentative plans to present an abbreviated version at other area schools, but no dates are set.

