

## What's happening

### Ongoing

■ The Davis Food Co-op has opened enrollment to Davis public schools for its "Carrots in the Classroom" program. Started in 2001, Carrots in the Classroom offers free classroom visits to provide hands-on lessons in cooking, storytelling, breathing and movement, the 4R's and farms and food.

### Wednesday

■ Davis' 4H programs will host an informational meeting at 7 p.m. at the Stephens Branch Library, 315 E. 14th St. The event will provide information about all three Davis 4H clubs — Golden Valley, Norwood and West Plainfield — and what 4H is all about. Kids ages 5 to 19 can join.

### Saturday and Sunday

■ Become a fully trained baby-sitter, certified in infant and child first aid and CPR at a two-day program offered by the city of Davis to children ages 11 to 15. The program takes place Saturday and Sunday, from 9 a.m. to 3 p.m. each day at the Community Pool Building in Community Park. The cost is \$125. Register by phone, 530-757-5626, online at <http://www.cityofdavis.org> or in person at 600 A St., Suite C.

■ Fairytale Town in Sacramento presents the 12th annual ScholarShare Children's Book Festival featuring guest authors and illustrators, storytelling performances, hands-on literacy activities, a book fair and more. The two-day festival, which runs from 10 a.m. to 4 p.m. each day, is free to the public. For more information, visit <http://www.fairytaletown.org> or call 916-808-7462. Fairytale Town is located at 3901 Land Park Drive in Sacramento.

### Sunday

■ The Sacramento-Davis chapter of Amigos de las Americas will host an informational meeting from 1 to 4 p.m. at Shriners Hospital, 2425 Stockton Blvd., in Sacramento. Families are invited to learn more about the program, which sends high school students on service-oriented trips to Latin America during the summer. For more information, email [sac.davisamigos@gmail.com](mailto:sac.davisamigos@gmail.com).

### Thursday, Oct. 4

Davis High School hosts a University of California workshop for seniors interested in applying to a UC campus and their parents. The event begins at 7 p.m. in the Brunelle Performance Hall, 315 W. 14th St.

# Not just spinning their wheels

## Team Blend is back on the job

By Anne Ternus-Bellamy  
ENTERPRISE STAFF WRITER

The wheels are turning again in Zach Powers' class.

Powers (formerly Ronneberg) teaches physics at Da Vinci Charter Academy, where for two years, students have been harnessing the energy of spinning bicycle wheels and converting it into energy for everyday use in the village of Sabana Grande, Nicaragua.

Two years ago, students created a bicycle-powered blender that gave operators of an off-the-grid restaurant in Sabana Grande a way to make the popular juice smoothies everyone there loves without using traditional power sources.

After a year in the classroom creating and perfecting their prototype, the students and chaperones had traveled to Nicaragua, where they lived with host families, taught classes to local children and built the bicycle-powered blender with the assistance of residents.

This past summer, a new group of physics students headed to Sabana Grande, this time to build a more versatile bicycle-powered generator that could be used for any number of things. Again, the 13 students stayed with host families, participated in reforestation efforts and taught local children, accompanied this time by Powers, Da Vinci biology teacher Rebekah Rottenberg and volunteer Deb Bruns.

It was Bruns who brought the idea to Ronneberg three years ago. She had visited Sabana Grande with her family, meeting the "Solar Women of Totogalpa," a group of women who have been making the most of energy harnessed from the sun, wind and other sources.

These women have been experimenting with renewable energy technologies for years, making and selling everything from solar panels to solar cookers and solar dryers. They even started the off-the-grid restaurant, but hadn't figured out a way to make smoothies with an alternative energy source.

In stepped the Da Vinci students, and the rest is history.

Student Mimi Wilcox made a return trip to Nicaragua this summer, one of a handful of students to visit twice. Briana Campos went for the first time, but was following in the footsteps of her older sister, Maggie. Briana even stayed with the same family her sister had stayed with the year before.

"I got there and said, 'Hi, I'm Maggie's sister,'" she laughed.

She was welcomed with open arms.

"It's so easy to become one of the people there," Campos said.

In building the bicycle-powered generator, the Da Vinci students enlisted the expertise of the solar women, as well as the insight and assistance of local teens.

"We wanted to get everyone involved," said student Tal Medovoy.

At first it wasn't easy, Medovoy said, because the local teens simply would agree with all of the Da Vinci students' ideas. So the Davis teens stopped offering ideas and suggestions, and soon enough, the Nicaraguan teens were providing more input.

"It ended up being really efficient and the language barrier was almost gone by the end," Medovoy said.

The group stayed a few days longer this time — a full two weeks compared to the week and half last summer — and used their extra time to see a little more of the country and spend more time with their host families.



Da Vinci students, above, and Team Blend members Alan Kyle, right, and Tal Medovoy, center, work on a bicycle-powered blender in Sabana Grande, Nicaragua.

At right, Team Blend members — from left, Graham Garzon, Caroline Paikoff and Mimi Wilcox — watch as one of the local children in Sabana Grande, Nicaragua, goes for a spin on their blender bike creation.

COURTESY PHOTOS



They taught classes to the local children again, mostly about water and electricity, refurbished the bicycle blender built the previous year, and helped with local efforts to reforest the nearby mountainside. The latter proved eye-opening.

Used to all of the hard labor and heavy lifting of life in Sabana Grande, the women there had no problem carrying as many as 10 young trees up the hillside at once — sometimes even texting on their phones at the same time. Meanwhile, the Da Vinci boys struggled under the weight of two or three trees, giving the local women a good laugh.

One of the things Team Blend students noticed was the time and labor required of the women to irrigate their crops growing at higher elevations. The women would literally lug buckets of water up the hillside, over and over again, to water their crops.

That got them thinking of what else might be powered by spinning bicycle wheels — namely, a pump.

"A pedal-powered pump might help get the water higher," Powers noted.

The team hasn't settled on the pump for this year's project just yet, but it's a contender. Meanwhile, Rottenberg is planning to introduce a biology component to the project. Possibilities for that include Da Vinci students identifying and studying native plants and insects from photos sent by villagers.

Whatever they end up doing, the members of Team Blend are already committing to a third trip to Nicaragua and all of the attendant time and fundraising that will be needed. Powers said the trip cost about \$2,000 per student for travel, materials for their projects and everything else, with students themselves gathering much of it through their own fundraising efforts.

Community members who are interested in helping out are welcome. Learn more at the team's website, [www.teamblend.org](http://www.teamblend.org).

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# Testing 101: What do students need to take, and when?

■ **Editor's note:** We are pleased to premier a new monthly column today that focuses on college issues.

Well, it's that time of year again ... high school students are preparing for the dreaded standardized tests. The PSAT, ACT, SAT — a veritable alphabet soup of headache-inducing letters for students and families alike. Setting aside the controversy surrounding standardized tests, let's just accept that for now they are not going away.

College-bound students need to take several of the following tests to be eligible for college:

■ **Scholastic Aptitude Test** — The SAT tests reasoning and verbal abilities. There are three subtests — critical reading, math and writing — and each counts for up to 800 points for a total of 2,400 points.

■ **Preliminary SAT** — This is a practice test for the SAT. The only time PSAT scores count is in the fall of the junior year when scores are used to determine qualification for the National Merit Scholarship Program. This test is coming up (Oct. 17 or Oct. 20). See your high school counselor for more information.

■ **SAT subject tests** — These tests are given on individual subjects to improve a student's credentials for admission. Which subject test to take depends upon college entrance requirements for each school. Check schools' websites for more information. The more competitive the school, the more important it is to take these tests.

■ **American College Testing** — The ACT is an achievement test. It more closely resembles a student's curriculum. A possible score of 36 can be earned on each of five components — English, math, reading, science and an optional writing component (often required by top colleges). These scores are averaged to arrive at a composite score.

### Which tests should I take and when?

Virtually all schools accept both tests, so which should a student take? The answer is "it depends." Certain students are more suited to the ACT while others prefer the SAT. Some trade-offs to consider:

■ The ACT tends to have more straightforward questions, but the student has to tackle them in bigger chunks.



*As for how many times to take each test, most students take them once or twice, and according to the College Board there is no evidence to support the idea that taking the SAT more than twice results in significant score gains.*

■ The SAT is broken up into smaller sections and tends to emphasize vocabulary. Writing is required but science is not. Still not sure? Then it is a good idea to try both if you have the time and the money.

As for how many times to take each test, most students take them once or twice, and according to the College Board there is no evidence to support the idea that taking the SAT more than twice results in significant score gains.

The best time to take each test depends on the student's schedule and the family's activities. Many experienced counselors recommend that 11th-graders take the PSAT in October, the SAT in March and the ACT in April. Depending on the results, a student may want to try again at the beginning of his or her senior year and/or work with test prep professionals. Check [www.collegeboard.com](http://www.collegeboard.com) and [www.actstudent.org](http://www.actstudent.org) to learn more.

### A little bit of sunshine

If you are really test-averse, there are still colleges out there

for you. The website [www.fairtest.org](http://www.fairtest.org) has a list of schools that do not use SAT or ACT scores for admissions. And while the SAT critical reasoning or the ACT is required by all four-year schools with some exceptions, all schools will accept the highest score from either test.

I hope I haven't tested your patience too much with all of this testing information. Just take heart and remember that there is a college out there for everyone!

— Jennifer Borenstein is an independent college adviser in Davis and owner of The Right College For You. She lives in Davis with her husband and two daughters. Reach her at [jenniferborenstein@therightcollegeforyou.org](mailto:jenniferborenstein@therightcollegeforyou.org), or visit [www.therightcollegeforyou.org](http://www.therightcollegeforyou.org).

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