



Marty Hazeltine, 16, left, and Skye Evans, 18, sit at the computer where they created a map of the Orchard District Neighborhood Association, while Evans holds the Grand Champion Oregon State Fair 4-H Youth Mapping Contest trophy they won for their map, at Marshall High School in Bend on Tuesday. The two mapped the area, near Pilot Butte, using GIS technology.

Andy Tullis / The Bulletin

A moment of recognition

Two high schoolers and their award-winning mapmaking hobby identified the areas where Bend could improve some of its streets. The city is showing interest.

By Scott Hammers / The Bulletin

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What the Marshall High students did

Skye Evans and Marty Hazeltine partnered with the Orchard District Neighborhood Association in Bend to develop a map of walking and biking routes west and northwest of Pilot Butte. The two walked or bicycled every street in the neighborhood, using a GPS device to record where sidewalks were unavailable or falling apart and where bike lanes were and were not available. Their findings were merged with a pre-existing map of the neighborhood, creating a resource previously unavailable to the city and the neighborhood association, and making recommendations on where new sidewalks are needed.

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Eighteen-year-old Skye Evans was looking for something to do instead of going home after school when he joined the 4-H Tech Wizards club at Marshall High, Bend's alternative high school. Now, he's a state champion, with a head start on a career in a fast-growing technical field.

Along with Marty Hazeltine, a junior at Marshall this year, Evans, a 2008 graduate, was named the winner of the statewide National Geographic My Wonderful World youth mapping competition. The Marshall team was one of six from high schools across the state to show their projects for judging at the Oregon

State Fair earlier this month. Teams use GPS devices and professional-level mapping software to develop useful maps in their home communities.

At a high school where recognition is as scarce as after-school activities, and students often attend after struggling to deal with mainstream schooling, Marshall's win is a great accomplishment.

The Tech Wizards competed against students from traditional high schools around the state, making this in some ways an even bigger coup for the school, which is often forgotten except at the times of year when dropout and testing statistics are released.

For a school many people don't even know exists, it's a rare moment of recognition.

Principal Dave Holmberg said the school is excited about the award but also that it's a fairly typical example of how Marshall looks to team up with the off-campus world to create opportunities for students.

"We don't have a sports program, we don't have a lot of things that other high schools have because of our size and our magnet school status," Holmberg said. "But what we look for are partnerships where our kids can shine in an area of their interest, and hopefully, also contribute to their community."

Evans and Hazeltine's winning project was a partnership with the Orchard District Neighborhood Association to develop a map of walking and biking routes in the neighborhoods west and northwest of Pilot Butte.

According to Cheryl Howard, the chairwoman of the neighborhood association, the association had been attempting to catalog walking and biking conditions in the area for some time, with little success. When a survey in January identified walking and biking routes as residents' No. 1 concern, the neighborhood association approached the Geographic Information Systems (GIS) program at Marshall for help.

It was, Howard said, an enormous undertaking.

"In the Orchard District, you've got an old neighborhood with some infill development, so you've got sections of sidewalk that just end at a property line, and this is repeated over and over throughout the entire neighborhood," she said. "We've got bike lanes that are obvious hazards ... big issues (with the Americans With Disabilities Act), you've got sidewalks that are in such disrepair that somebody who's in a wheelchair can't even access them."

In developing their map, Evans and Hazeltine walked or bicycled all of the streets in the neighborhood, using a GPS device to find out the state of the sidewalks.

The information gathered by the pair will be used by the city and the neighborhood association to plan future sidewalk and bike lane improvements. At a meeting last week, the City Council presented a certificate of appreciation to Evans and Hazeltine, and City Manager Eric King said he'd like to see schools partner with neighborhood associations around the city and take on similar projects.

Marshall instructor Drew Erickson teaches the school's class on GIS mapping and taught both Evans and Hazeltine before they joined the Tech Wizards club. Erickson said most Marshall students do not go on to four-year colleges, but by learning how to use GIS programs while still in high school, they can move into a growing industry right after graduation.

"The goal here was to give some of our students skills where they can literally walk out of the class and go get a decent-paying job," Erickson said. "I guess there's a real lack of people who know how to use this software."

Evans said that even though he joined the project just as something to do after school, he got more and more interested as time went on. He's taking a year off to save money for college but is giving serious thought to GIS mapping as a career possibility.

"I still haven't decided what I want to go to college for, but I'm thinking GIS might be kind of fun, so I'm thinking about trying that at (Central Oregon Community College)," he said. "My dad suggested maybe do a year of that and apply for the Air Force to do mapping. Already having experience through the college, it would be more likely I would get what I wanted in the Air Force."

Club adviser Sara Cofer said Evans and Hazeltine were up against strong competition at the fair this year, with other teams creating maps cataloging the condition of the street trees in Hillsboro, and another identifying all of the water sources that could be tapped to fight wildfires in Clackamas County.

"It's kid-designed, and so sometimes you do get really strange things like (mapping) all the Taco Bells in town, but we didn't see any of that at the fair this year," she said. "All of the ones at the fair were community projects that actually were needed."

Mapping Taco Bells may not be as strange as it sounds, Erickson said. While GIS mapping is commonly used by city public works departments to keep track of street conditions or fire crews that need to know the exact location of a wildfire, Erickson said, businesses are increasingly taking advantage of it as well.

"It's huge, it's a multibillion-dollar industry right now," he said. "If they want to build a new McDonald's, they'll use this software to figure out where all the

McDonald's are in Bend, and all the traffic patterns, and figure out where the best place to put a new McDonald's is.”

The Tech Wizards club at Marshall meets after school, and in recent years has exposed students to subjects like aeronautics and robotics. Cofer said the club provides a hands-on way for students who don't always respond to traditional instruction methods to learn about the practical applications of scientific concepts.

“When I mention I work with Marshall, people assume it's kids that are hard to deal with, and they're not,” she said. “They're delightful kids, and they work really hard.”

The club is looking for new mapping projects to take on this year, and Cofer invites the public to e-mail her with suggestions at sara.cofer@oregonstate.edu.