

Programming: Elements of robotics, drones may be taught next year

Continued from Page 1A

Riehl, the camp's instructor and the computer services director at the college.

"That's the neat thing about this is you can start building things right out of the box," he said.

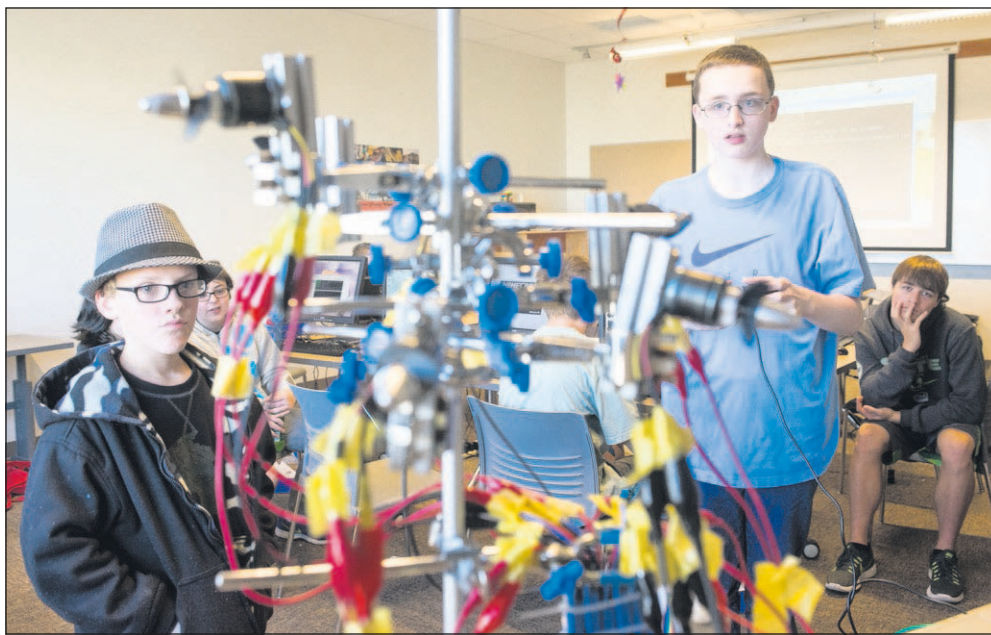
Scratch and Python

Students hooked up their Raspberry Pi to computers to program using two programming languages, Scratch and Python. They created their own video games early on in the camp using Scratch, then moved on to interacting with the outside world by hooking up other devices, such as LED lights, buttons, heat sensors and small cameras.

Elena couldn't decide whether her favorite part involved the LED lights they made flash or a tiny camera they were able to program to take photos and video.

How to code

Georges Oates Larsen helped teach the teenagers how to code to make their electronics respond. He circled the room with Riehl to assist anyone with questions



Joshua Bessex/The Daily Astorian
Parker Fergus, 13, left, watches as J.J. Heacock, 14, right, controls a brushless motor system operated with the help of a Raspberry Pi during Raspberry Pi camp at Clatsop Community College Thursday.

or a program that wouldn't run.

Oates Larsen had discovered Riehl was holding the camp and got involved.

"I love programming. I love kids. And I love teaching them programming," Oates Larsen said. "I've enjoyed doing this."

After one more year at the college, he plans to transfer

to Portland State University to study mathematics with a possible minor in computer science.

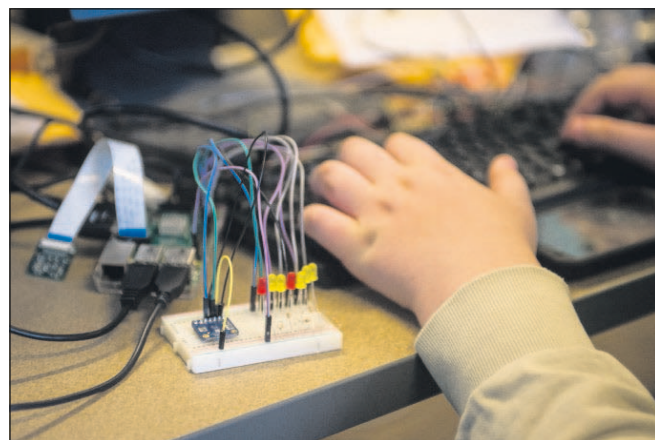
Oates Larsen is president of the Remotely Operated Vehicle Club, which actually uses the Raspberry Pi for their underwater vehicle.

He demonstrated to the class how the club uses the Raspberry Pi to control the

vehicle's motors via a controller.

Next year, Riehl would like the program to include elements of robotics and drones.

"If they can get really excited about programming at this age, there's no telling what they can do," Riehl said. "That's where we're going to get the next generation of software."



Joshua Bessex/The Daily Astorian
A Raspberry Pi and temperature probe sit on a desk during the Raspberry Pi camp at Clatsop Community College Thursday.



Joshua Bessex/The Daily Astorian
Instructor Georges Oates Larsen, shows the class how to record videos during the Raspberry Pi camp at Clatsop Community College Thursday.

Slough: Project involves 2,317-acre watershed full of salmon habitat

Continued from Page 1A

opening made water spew through at a high velocity. The adults could just make it through, but it was a deadly spot for young salmon, Ferrier said.

For now, the area looks a little bit like a disaster — as do all restoration projects when they first begin, said Ferrier. But refuge biologists are looking forward to the months after work wraps up in the fall. With the culvert gone, the daily influence of tides will wash through the slough and it is common to see fish return in encouraging and even surprising numbers, Ferrier said.

"It's not cheap, but there are big impacts," she said.

Big gain in habitat

The overall project involves a 2,317-acre watershed full of important salmon habitat.

The refuge owns the land and, over the years, has



Madeline Kalbach/Submitted Photo
A newly installed box-style culvert provides tidal-level access to extensive acreage south of U.S. Highway 101 near Long Beach, Wash.

picked away at fish passage projects upstream when money has become available, restoring four different streams, nearly 10-miles worth of spawning habitat for cutthroat trout, chum and other salmonids.

But the final piece, the old culvert, was more complicated. Various groups

held easements or right-of-ways in this area next to the highway — the Bonneville Power Administration and the Washington State Department of Transportation, to name two. Also, over the years, people interested in pushing the project through have come and gone. It was the same story for funding

sources, too.

Then in July, McMurry announced her group had landed \$75,000 from the state, this in addition to a \$373,524 grant from the Washington State Salmon Recovery Funding Board that the Friends of Willapa National Wildlife Refuge landed in 2014.

"Ideally we would have proceeded from the downstream to upstream direction in terms of these improvements," said Cleve Steward, one of the Sustainable Fisheries Foundation's executive directors and the current project manager on this part of the Greenhead Slough project. "But because of the funding and just the sort of mechanics of getting all this work done, it didn't work out that way."

Money drives work flow

With these kinds of large, expensive, long-term projects, you have to be opportunistic, Steward said.

They were confident they would be able to get to the lower stream eventually.

"You don't say 'no' just because things are out of sequence," Steward said.

The Sustainable Fisheries Foundation is another partner with the refuge and is managing the funds

brought in by the Friends of Willapa National Wildlife Refuge.

"It was a very collaborative process," said Steward. A list of partners on the refuge's informational page about Greenhead Slough names 19 different groups, agencies and departments.

"We got great support from the state agencies, in particular the Washington Department of Transportation and the Washington Department of Fish and Wildlife," Steward added, saying such cooperation can make or break a project like this.

"We rely so much on them and if they're able to engage with us early and effectively then the project goes so much more smoothly ... it really helped us to make sure the project was done correctly and within the schedule and budget we have."

Major work will wrap up this summer, with planting and seeding of the area to continue in the fall.

Crashes: Alcohol, drugs are not listed as a cause in any of the fatal crashes

Continued from Page 1A

For the sheriff's office, the focus is on county roads which have a relatively low amount of fatal crashes. Williams points to lower speed limits on the local roads as a main factor.

"You take away speed and that has a lot to do with how a crash turns out," he said.

On scene

The sheriff's office, Oregon State Police and local police departments often work together when responding to fatal accidents. Fatalities commonly occur after a vehicle crashes into a ditch, guardrail

or the person is ejected from the vehicle, the data shows.

State troopers are regularly called to fatal crashes, even if the crashes do not occur on state highways, because of their enormous amount of training for that type of investigation, Williams said.

Despite the training, Williams said, law enforcement officials are not always able to deal with family or friends of the deceased, who may be at the crash scene.

"One of the challenges we have always dealt with is the trauma on the scene and helping the families that may be there or show up," he said.

The sheriff's office re-

lies on a chaplain program, where local church leaders respond with law enforcement to a fatal crash and assist the friends and family through the trauma. Chaplain programs are becoming more popular around the country. Williams estimates at least 70 percent of sheriff's offices in Oregon have such programs.

"It has truly been a blessing," he said. "They can concentrate wholly on the family and the trauma and assist them through that. We have a very devoted group of chaplains that will come out at a drop of a hat."

Safety improvements

A key reason for maintain-

ing the crash data is to improve the safety of roadways across the state, according to Department of Transportation spokesman Lou Torres.

The data allows the state to pinpoint and prioritize stretches of roadway that may be problematic. The department is then better able to funnel money to roadways with the most crashes for safety improvement projects.

"We really have to know if there is an intersection or stretch of road we need to work on or improve for safety reasons," Torres said.

Last year, the department identified a nearly 7-mile stretch of U.S. Highway 101

from Camp Rilea Armed Forces Training Center to Surf Pines Lane as a priority safety improvement project.

The plan is in place and individual projects will begin as funding becomes available. The first project will add a J-turn near Cullaby Lake. Work is funded and scheduled to begin in 2018. Other proposed projects through the corridor include adding center turn lanes, widening the shoulders and improving intersections.

Causes

ODOT's fatal crash data lists multiple causes for the crashes. Speed, fatigue and reckless driving are all found

in the data. So is improper passing, not yielding and following too closely.

But alcohol or drugs are not listed as a cause in any of the fatal crashes over the past decade.

Williams has a hard time believing not one crash was caused by impairment. One possible explanation is that crash data is collected before toxicology reports are available or drivers are charged with crimes.

ODOT insists the data is up to date.

"If there was alcohol or drug impairment, it would show up as a cause," Torres said. "I can't explain what is not there."

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