

## FIRST Robotics *continued from front page*

members from 8<sup>th</sup> grade through 12<sup>th</sup> grade and mentors to participate and join their team. Saturday, January 9 marked the beginning of build season and the kick off challenge was presented. The LoggerBots are actively working on the design and construction of this year's robot.

Under strict rules, limited resources, and an intense six-week time limit, teams of 20 or more students are challenged to raise funds, design a team brand, hone teamwork skills, and build and program industrial-size robots to play a difficult field game against like-minded competitors. It's as close to real-world engineering as a student can get. Volunteer professional mentors lend their time and talents to guide each team. Each season ends with an exciting FIRST Championship. This year's championship will be held at the Veteran's Memorial Coliseum in April.



*The Vernonia Loggerbots*

FRC is a larger scale robot with a playing field a bit smaller than a football field and a bit larger than a basketball court. The average annual cost for the kit of parts and league play is \$10,000. There is typically other expenses such as build material and practice field elements. Any and all travel, team t-shirts, snacks, etc., is covered by parents and team members. With fundraising, grant writing, PR and more, mentors, volunteers, and students play an important part in making the program possible year to year. The LoggerBots are actively working on a business plan to help make the program more self-sustaining.

FTC is a smaller scale robot and can fit on most table tops. The playing field is roughly the size of half a basketball court. The average annual cost for the kit of parts, and league play is \$1,000 per team. There is typically other expenses such as build material and practice field elements along with travel, team t-shirts, snacks, etc.

The two teams participating in FTC, 9263 Squirrel?! and 9262 Red Shirts (think Star Trek) have already completed their league schedule and competed in the league final on Sunday, January 17 at Hillsboro High School.

FTC teams (10+ members, grades 6-12) are challenged to design, build, program, and operate robots to play a floor game in an alliance

format. Guided by adult coaches and mentors, students develop STEM skills and practice engineering principles (like keeping an engineering notebook), while realizing the value of hard work, innovation, and sharing ideas. The robot kit is reusable from year-to-year and can be programmed using a variety of languages.

The kids are responsible for every aspect of their program and take much pride in this fact. Mentors are present to loosely supervise and give input. This program is almost entirely student led.

Vernonia's two FTC teams are part of a total of 250 across Oregon that compete each year with a challenge announced in September. The Vernonia teams have been meeting twice weekly from September through January. They are

a member of the Hillsboro league and attend four events where they compete against other robots a minimum of 20 matches. Depending on results, the teams have the opportunity to advance to state, regional, and national competitions.

The challenge is different every year, and this year's challenge, called ResQ, revolves around mountain climbing and climber rescue with obstacles including debris clearing, zip lines and mountain climbing. "Compared with previous years, this year's challenge makes it harder with a steeper ramp, higher mountain, and greater risks," says Jeff Ely, one of the program's mentors. "Numerous robots have flipped in each league event we've attended."

This year the robot control system has been upgraded to the Android platform using Java, so the robot carries

*continued on page 16*

## Loggers Named to All State Football

Congratulations to the several members of the Vernonia Loggers football squad who earned All State Honors following their very successful 2015 season. Junior Steele Ware was named Second Team All State at quarterback after running and throwing for 38 touchdowns. Senior Blade Ware was named Second Team All State at running back after scoring 30 touchdowns this season. Senior Cody Nelson was named Second Team All State at offensive line. Junior Brett Elliott was named Honorable Mention. The Loggers averaged 50.2 points per game this season while going undefeated in league play, winning the Northwest League title and compiling a 9-1 overall record.

## Grant Awarded to FIRST Robotics FRC Team 4127 LoggerBots

FIRST FRC Robotics Team 4127 LoggerBots, was founded in 2012. Though this is a school sponsored team it is not a school funded team. Every year the team struggles to raise roughly \$10,000 to participate. The cost covers the expense of the kit of parts, which is the starting blocks of the student designed and built robot and team play events.

This school year the 4127 LoggerBots had many obstacles to overcome. The primary obstacle was fundraising. This year the team is predominately new student members, mentors, volunteers, and main leaders. Due to the change in leadership and timing of the change, deadlines for many of the usual grants they receive had expired. While basically starting the year off with a \$0 balance in accounts, they were determined to try to maintain an FRC program for their schools. Many of the parents involved have seen too much good come from the FIRST experience to allow it to fade away.

For an example, during the last FRC season the LoggerBots had 5 graduating seniors. Three of these are currently enrolled as college freshmen to become engineers, and two others are pursuing STEM related fields.

The 4127 LoggerBots compete on equal ground with much larger schools, such as Glencoe, Catlin Gable, Sunset, and smaller non-school related groups such as 4-H robotics and smaller private schools. All the while working without facilities, such as a metal shop of their own and lacking the support and facilities that teams out of town have the opportunities to utilize such as tech businesses and machine shop businesses that lend their support by offering spaces and materials for teams to use.

This year the Pacific Northwest Region of FRC has been actively fundraising to try to bring down the costs by about half, to help teams stay in the program. Even with this reduction, the LoggerBots had \$5,000 to raise in about 90 days to even have a team this year.

Mentors, volunteers and students went to work by selling popcorn and treats at the Spirit of Christmas, asked for support and donations through mailings, reached out to the Vernonia Education Foundation, the Johnson Foundation, Vernonia Schools, friends, relatives and managed to raise roughly \$3,700. With only \$1,300 to raise to pay their remaining portion to afford the kit of parts and game play events, the team applied for a grant through Daimler Education in Motion. The team's hopes were to maybe get accepted to just bridge the gap to have an active team and any additional expenses they would continue to fundraise.

The LoggerBots were awarded \$18,100 from Daimler to not only have a program this year and cover all the team's expenses, but to have a head start on their fundraising efforts for next school year.

*About Daimler Trucks North America- Daimler Trucks North America LLC, headquartered in Portland, OR., is the leading heavy-duty truck manufacturer in North America. It manufactures, sells, and services commercial vehicles under the Freightliner, Western Star, Detroit, and Thomas Built Buses nameplates. Daimler Trucks North America is a Daimler company, the world's leading commercial vehicle manufacturer.*

### Vernonia Veterinary Clinic

*Small and Large Animals*



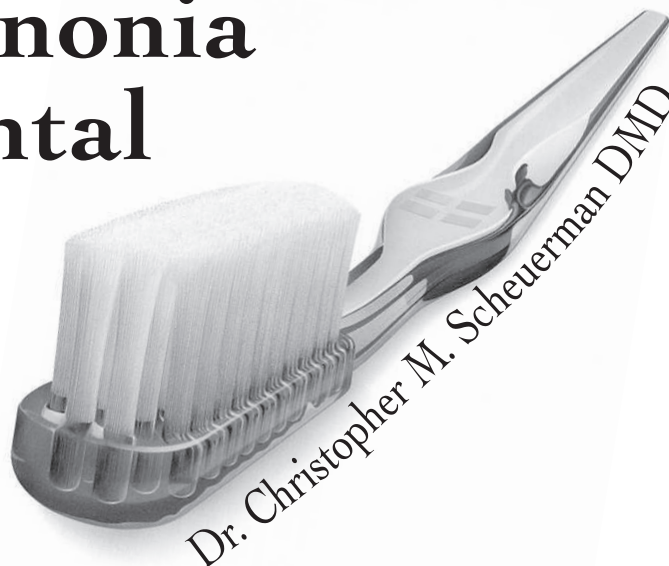
**Open**

Mon, Wed & Saturday  
9 a.m. - 4 p.m.

Call for Appointments  
(503) 429-1612

Or 24 hr. Emergency Number (503) 397-6470  
700 Weed Ave. Vernonia, OR

## Vernonia Dental



622 Bridge Street Vernonia, OR 97064  
phone (503) 429-0880 -- fax (503) 429-0881

**Don't Sell it!  
Pawn it!**  
**For fast  
cash!**



**Baseline  
Pawn, Inc.**

2245 Baseline St., Cornelius  
(Across from Fred Meyer)

**503-530-8119**  
State Licensed PB-0388

Open  
everyday  
at 9 a.m.