

## STEM, Afterschool Summit held to educate, seek community support



First Lego League Robotic Team members from Oak Ridge Intermediate interact with attendees of the summit and showcase their robot. Robotic students explained what the team is expected to perform at competition and how their robot works. Photo by <u>Dianne Steingrubey</u>.

By Dianne Steingrubey

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More than 50 business leaders, civic organizations members, government officials and Lake Area educators convened at Hawthorn Elementary Friday to discuss ideas to help support afterschool programs stimulating Science, Technology, Engineering and Mathematics (STEM) career development.

Hosted by Camdenton School District's Afterschool Services, the summit was held during Lights on Afterschool Week (Oct. 17-21), a national celebration of all after school programs.



Photo by Dianne Steingrubey

Kyle Gulshen, junior at CHS and a lead programmer of the 4H *FIRST* Laser Robotics Team, gave his viewpoints of the correlation between the classroom and the after school robotic program during a summit held Friday at Hawthorn Elementary.

Dr. Jim Rich, Camdenton R-III assistant superintendent, welcomed attendees and set the tone for the day's event.

"We are going to communicate with you today some things we do with our Afterschool programs and hope you communicate back some ideas, input and suggestions you have for us," Rich said. "We constantly seek to improve our program and do things better for our kids. I don't think there's a person in the room that doesn't care about kids or you wouldn't be here, and that is certainly the reason we are here, as well."

Rich then introduced Dr. Ina Linville, MU Extension 4H program director, who served as the moderator for the summit. She set the stage for attendees and explained what STEM is, why afterschool matters, and identified characteristics of quality afterschool environments and the outcomes.

The characteristics she highlighted of quality after school environments include having sustained relationships with caring adults, activities that expand students' horizons and holding their interests and a positive peer group.

If we have those quality indicators in afterschool programs then the outcome is positive youth development, she said.

She classified positive youth development as students who show social characteristics reflecting "Five C's," that is, competence, confidence, caring, character and positive social connections, which she cited from Dr. Richard and Jackie Lerner from Tufts University.

"The Lerner research shows that if kids are just in sports that they are not necessarily to have as much high positive youth development. This comes from a longitudinal study where they followed kids from fifth grade up to 12th grade that were just in sports. But, the good news is, if they just have one good afterschool experience that boosts up the higher youth development. So, sports alone doesn't get kids there."

She added that students who are in positive youth development programs are more likely to go on to higher education, have career aspirations in science and are more engaged in their community.

Linville then introduced Teri Foulkes and Jeff Buehler of the Missouri Afterschool Network (MASN) who informed guests about MASN's partnership with the district and a new program at MASN called Project Liftoff, a project dedicated to elevating the level of STEM learning in youth programs.

Representative Diane Franklin then began her speech with the state's focus on the economy and how more revenue will benefit education. She said the state legislators want bring new businesses that create high paying jobs to Missouri and the targets for these businesses are the high tech jobs, the data centers and other elements that speak to what STEM is hoping to promote within our state.

"If Missouri is going to be competitive not only on a national level but globally we have to make significant investments in our young people and even in our junior college type setting as well," Franklin said. "We can entice high tech businesses to locate in our state, and they can offer all kind of amazing job opportunities; but if we don't have the educated and skilled work force to meet those jobs were going to lose out in our state."

"That's why we're thankful for the efforts of people like you who are interested in afterschool programs and the afterschool alliance we applaud you all," she added. "The nurturing environment you provide and additional levels of learning that are available to our young people; this plays a critical role in preparing them for a brighter tomorrow."

Attendees also heard presentations from Afterschool STEM program instructors. Cindy Gum, who is a Lake Area Master Naturalist, educated guests about the Conservation Kids Program and Dave and Kathy Smythe from Mad Science demonstrated attention-grabbing science experiments.

John Albright of the Camdenton Optimist Club explained the club's involvement with Camdenton's *FIRST* (For Inspiration and Recognition of Science and Technology) Robotics Team and encouraged support of the Afterschool program.

"We learned about this program and we became fans of the program," he said. "We've donated financially and helped out in the fundraisers ... I think it would be wonderful if we could develop some communication and advocacy strategies together that would lead to more positive and more private investment, more mentor sponsorship and more volunteers that would help address growth needs of the five programs in the school district."

The last hour of the summit, guests listened to parent and student perspectives of the *FIRST* Robotics teams. Debbie Cahail said the program helped her daughter, Stephanie, who was undecided what she wanted to study in college before joining robotics, pursue a degree computer science and electrical engineering.

"I just can't say enough about this program," Cahail expressed. "It teaches kids so many things about life; what they're learning in the classroom they're able to put it to real life experience."

Five students from Oak Ridge Intermediate, who are members of the *FIRST* Robotics Lego League Team, shared projects they are currently working on, core value and beliefs of their team and details about their robot challenge.

Attendee of the summit, Trish Creach, Lake Area Chamber executive director, asked the students what has been the most exciting part of being involved with the robotics team. One student, Rachel, replied that she enjoys seeing how everything comes together throughout the competition season and Allison, said she enjoys how working as a team brings everyone together.

Kyle Gulshen, a junior at Camdenton High School and lead programmer of the robotics team, gave his viewpoints of the correlation between the classroom and the after school robotic program.

"When you're learning in the classroom, you're learning these mathematical formulas over here and scientific theorems over there and it never really comes together," he explained. "So, with *FIRST* you get to work on all these different aspects all at once and a single, real world problem. You get that mindset of mathematical thinking and scientific thinking and with that, you can take that back into the classroom and do so much better."

The funding for Afterschool programs like robotics comes from 21st Century Community Learning Centers grants, sponsorships and community support. Mitch Comer, Camdenton R-III Project Lead the Way Instructor and robotics coach, said the robotics program got started with grant money and now that grant money is disappearing.

"That's what its purpose is; to get you up and going," he said. "Now we're worried about sustainability. We are trying to find those people that can assist in many different ways and that's why you've been asked to come here today."

Comer said robotics started three years ago with a team of 21 students that he handpicked. This year, the program now has 250 plus students involved in *FIRST* Robotics at Camdenton R-III.

"That is only being limited by mentors, space and resources," he said.

After the summit, attendees were treated to a five-course lunch prepared by LCTC Culinary Arts students. During lunch they were asked to participate in a round table discussion addressing topics on how to gain community support of STEM Afterschool programs. Many guests gave

suggestions about how their business or community organization could partner with the after school program.

For more information about Afterschool Programs at the Camdenton School District, partnerships or sponsorships, contact Sherry Comer at 573-346-9233.

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