

Excitement STEMs from hands-on district event

"They're doing really cool things with ice out there," shouted an excited student, encouraging others to venture outside the Enumclaw High School commons doors to a van where nanoICE, a molecular ice technology that keeps food fresher longer, was pumping its slushy, cool mixture into guests' hands.

"We've got to go see this," said a young man handing his parents a Living Computer Museum brochure. Taylor Earnhardt and Justin Spielman from the museum were set up in the high school commons with vintage computers for young to marvel and old-timers to get nostalgic. The Seattle museum is dedicated to preserving and displaying working examples of computers assembled by Paul Allen, who along with Bill Gates founded Microsoft.

And no one could pass by the EHS stage without taking a peek at NAO, the interactive humanoid robot. NAO was small on stature but big on "WOW" as he fixed his bright, blue eyes on the crowd gathered to watch him clap, sing and perform a variety of voice-command functions.

It was all part of the Enumclaw School District and Enumclaw Schools Foundation's "Spirit of Innovation" Jan. 30. A STEM Expo, the event is designed to excite students about careers related to STEM – science, technology, engineering and math – and to showcase STEM learning occurring in school district classrooms.

For four hours students could be found with their hands in STEM activities – extracting DNA from strawberries, welding, fingering preserved internal body parts and racing mousetrap cars.

"The hands-on part is really important," said Johna Thomson, president of the Enumclaw Schools Foundation. "I had one mom say to me this is amazing, a hundred times better than last year."

This year's event was much bigger with close to 50 exhibitors representing colleges, local and regional industries and businesses and school district programs, plus a crowd Keith Mathews estimated at 1,500 for the event that began at 4 p.m. and ended at 8. Mathews, a retired Boeing engineer who sits on the district's STEM Committee, was happy to report, "We will need a larger facility next year."

The event was free, open to the public and drew grandparents with grandchildren, homeschoolers, Boy Scout troops and private and public school students from inside and outside Enumclaw district boundaries.

Thomson shared an e-mail from an attendee, "A huge THANK YOU to the Enumclaw Schools Foundation for sponsoring the STEM expo. It was phenomenal. My grandsons learned so much with the hands-on robot activity, observing technology in the displays, and being surrounded by science, technology, engineering and math. One grandson (third grade) declared he will have a career in composite materials."

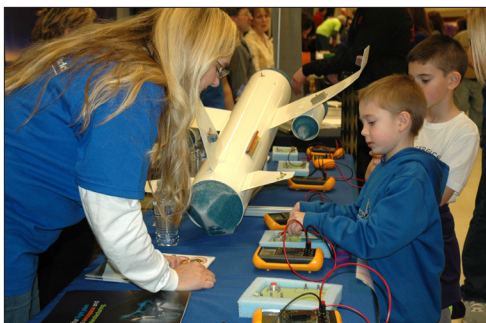
Thomson said originally the event was designed for middle and high school students, but, "what we found were the kids in elementary school were really interested and really engaged."

It was easy to see event planners hit their mark as younger students flocked from station to station and listened intently as middle and high school students enthusiastically described the classes and afterschool programs they actively participate.

The school district has expanded its STEM cur-



Whether interacting with NAO the humanoid robot (below left) or demonstrating their own robotics creations (below right), students took to the hands-on offerings at the 2014 STEM Fest.



riculum by leaps and bounds in the past 18 months. Visitors to the Expo could learn about the EHS aerospace manufacturing and the Aerospace Joint Apprenticeship Committee (AJAC) program, which opens its doors to local business apprenticeships in the evening; the robotics team, which placed eighth at state recently; Project Lead the Way, a hands-on, project-based program at the elementary and middle school levels; and EHS automotive tech, glassworks, drama program and advanced science classes.

"We are so thrilled and grateful to have built such a solid partnership with the Enumclaw Schools Foundation (ESF) and in particular the STEM committee of ESF," Superintendent Mike Nelson said. "The STEM Expo is a wonderful example of working together toward this common vision. Together we are building such great STEM programs during our school day and beyond!"

Thomson said the event is also a great way for students to make the connection between what they are learning in school and how it applies to the working world.

Businesses like Boeing, Pacific Metallurgical Inc., Helac Corporation, Devol Racing Equipment, Welsh Commissioning Group, Inc., the City of Enumclaw, Hill AeroSystems, Inc., Breedt Production Tooling and Design, LLC, and Advanced Composite Education Services joined the district, schools foundation and Enumclaw Rotary Foundation as sponsors, and were also at the event with demonstrations and information for eager minds.



A full list of exhibitors is provided below:

Hill AeroSystems
Dr. Skovmand, DDS
Green River Community College IT program
Green River Community College, technical education
EHS CAD/CTE
Black Diamond Elementary
Orion Industries
EHS aerospace manufacturing
Skills, Inc.
NW Technical Products
IBEW
CimTech
Helac
AIAC
Living Computer Museum
Fred Hutchinson Cancer Research Center
St. Elizabeth Hospital
Nether Industries
DEPCO, NAO humanoid robot
Microsoft
IAM/Boeing Joint Apprenticeship
Boeing
Central Washington University
Devol Engineering
EHS Automotive Tech
EHS Robotics Club
SkyNet
Breedt Production Tooling Design
EHS-Kibler Robotics
EMS Engineering/Robotics
King County Library System
MetalTest
Pacific Metallurgical
EHS drama
Museum of Flight
Project Lead the Way, Thunder Mountain and Enumclaw middle schools
King County Conservation District
EHS Glass Works
King County Fire District 28
Enumclaw Schools Foundation
Advanced Composite Education Services
Red Dot (nanolce Exhibit)
Flex-a-Lite/CFM Consolidated
EHS Science Department