



E.V. Cain STEM Charter School wins big at STEM fairs

By: Tricia Caspers of the Auburn Journal

Is Vitamin B12 absorbed into the blood better as an injection? Do people remember words better if they're written in different in color? Does expensive food taste better? These were a few of the sixth-grade science projects presented by E.V. Cain STEM Charter Middle School students at Placer County STEM Exposition fair on March 4 and 5. Nine of the 60 students took home awards, and a few will go on to the state competition in Los Angeles.

Of those, 35 students competed and won honors at the regional level. Students began brainstorming topic ideas in November, said E.V. Cain science teacher, Don Scott. They researched their ideas in December, formed hypotheses and began plans to experiment during winter break.

"Depending on the students' resources and how committed they were, the projects had varying degrees of complexity," Scott said. More complicated experiments included the Vitamin B12 study, conducted by Brazil, which required that subjects have their blood tested in a lab.

The sixth-grade scientist has been interested in the topic since she read a book about it in the school library in second grade. "I found a book about how people died from lack of vitamins," Brazil said. "It can really mess your body up." The most challenging portion of Brazil's project, she said, was finding six people who were willing to get their blood tested twice, as well as pay for the draws. "I would have had to pay more than \$1,000, if I had provided the (funding)," she said. In one comparison, Brazil's research showed that a person's Vitamin B12 absorption could increase by close to 900 milliliters when injected.

"It's a nice thing to be able to discover and get very pumped up about ... what you can do to help the world," Brazil said. Arsenith's experiment comparing the effectiveness of different types of preservatives required that she grow bacteria in a sterile lab over time.

All students were required to present a 20-page paper that included a hypothesis, procedure, findings, and five-page summary and opinion. "Science is something they are getting a lot of every day," Scott said. "Doing the science fair has become the cool thing." At the county STEM fair, Cain students dominated both the Scientific Inquiry and Rube Goldberg categories. In the Scientific Inquiry Amaya Shumaker won first place, Kirsten Jilot, second, and Mateo Packard, third. Also in the Scientific Inquiry, Addison Arsenith won an invitation to compete in the State Science Fair in Los Angeles on May 23 and 24 along with Brazil and Kirsten Jilot as alternates. In the Rube Goldberg category Packard won first place while Jilot and Hannah Bruce tied for third place.

The Placer County fair was the first of two fairs in which these students participated. On April 1 and 2, along with Scott, they traveled to Sacramento to compete in the annual Synopsys Sacramento Regional STEM Fair held at American River College. There they competed against the brightest young minds from all over the region, represented by 12 different counties. Emily Valdez won first place in behavioral and social sciences for her research into music's impact on cognitive performance....