SparkFun and K-12 Computer Science Teachers

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The eCSite project is a National Science Foundation GK12 program designed to partner Colorado Computer Science teachers with other K-12 teachers. This allows teachers without a technical proficiency to combine sensors, wireless networks and other embedded systems with their field. This way Earth Science teachers can talk about earth quake dataloggers, Algebra teachers can talk about manipulating variables in a computer program and, for an extreme example of embedded systems in the educational system, checkout TJ3Sat.

Take a minute to think about all the steps those students must have navigated in order to be able to create a satellite. The mission of eCSite is to connect current teachers in the schools (who don't have tons of extra time) with professionals in the engineering field to create a truly interdisciplinary model of Computer Science education that allows all students to aim for a project as complex as TJ3Sat. The beauty of it is that no two teachers have to implement the technology in the same way. It's called Constructivism, and we here at SparkFun throw our support behind it 100%!

So back on June 9th, SparkFun's Department of Education partnered with Google and the University of Colorado to introduce some Boulder Valley School District computer science teachers to the world of Arduino. The workshop, organized by Jessica Feld, spanned two days. Joel from Testing, Lindsay from Education, and Mike from Engineering helped the teachers to learn the basics of setting up Arduino, creating circuits and programming, all in three hours.

We took a brief break so Yindan could present her work with soft circuits and lilypad technology. She demoed MODKit (GUI for Arduino) and the various stuffed animals that local middle school students put together in a three week study. The stuffed animals were equipped with various sensors and a microcontroller with leads sewn into the material using conductive thread. The study was a collaboration between Manhattan Middle School and Craft Technology Lab, a sub section of the CU Computer Science Department headed by Mike Eisenberg. Home Economics meets Computer Science with a little bit of Art thrown in, sweet!

By the end of the day everyone got their LEDs blinking, dials and buttons reading, and Serial communicating. Teachers were also introduced to Processing, Android Open Accessory and the Scribbler robot. It was a great experience and we were glad to have been a part of it!

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