

Dear i3 Learning by Making Project Partner:

We are excited to share some updates on the progress of the *Learning by Making* project! The project management and curriculum development teams met with our inaugural cohort of teachers at MCOE to conduct the *Learning by Making* Summer Institute, June 16-20. Two science and math teachers from each of the six target schools attended five full-day professional development sessions that started to prepare them to teach new integrated science courses starting in Fall 2015.

Activities allowed teachers to deepen their understanding of how to implement Next Generation Science Standards in their courses. Each concept was reinforced with intensive, hands-on learning using Chromebooks, an interactive programming language (*Logo*), Applications (custom electronics) boards and sensors. By the end of the week, each team of instructors developed an earth science experiment and presented their results to the group. This learning and presentation structure will be replicated in the classroom, although of course with several weeks dedicated to the concepts and related experiments.



WestEd Report

As a STEM program, the goals of *Learning by Making* are to empower high school science and mathematics teachers, to improve students' interest and confidence in STEM subjects, to increase students' performance in STEM courses, and to encourage students to pursue STEM careers. Recognizing that the Summer Institute is a significant step toward achieving these goals, external evaluators from WestEd concluded that "the 2014 [LbM] Summer Institute was successfully delivered" and that although the PD content was challenging, "teachers indicated their interest and engagement, and they grew" in confidence and content knowledge.



"The 2014 Learning by Making Summer Institute was successfully delivered"

Community of Practice

The Institute also launched a community of practice, as teachers shared insights, expertise and perspectives that are unique and highly relevant to teaching STEM subjects. We are impressed with LbM teachers' talents and their collaboration skills! The SSU team and teachers celebrated their hard work during dinner at The Crush in Ukiah on Thursday night.



Upcoming Professional Development

The curriculum development and hardware/software development teams are diligently preparing for the next PD to take place on September 26 in Willits. They are taking lessons learned from the Institute and will incorporate teacher feedback about experiments into the training and curriculum. The subsequent Fall training will be at Fort Bragg HS on November 15, and three more dates will be scheduled at partner schools in the Spring. The LbM Summer Institute in June 2015 will be when the entire cohort gets to fine tune the first LbM course they will offer in the Fall semester.

The 2014 Learning by Making teachers and SSU and WestEd staff



Acknowledgments

The Learning by Making teachers –

Anderson Valley HS: Kim Jenderseck, Jim Snyder; Fort Bragg HS: Kayla Davis, Megan Schmitt; Point Arena HS: Kai Hamblin, Roger Little; Round Valley HS: Amanda Derby, Ann Marie Bauer; Ukiah HS: Allison Baldwin, Patty Halpin; Willits HS: Laura Herman, Susana Ramirez

MCOE Staff –

Theresa House, Katie Sommer, Emory Upchurch

Hardware/Software Developers (Donors) –

J. Garrett Jernigan, Brian Silverman, Barry Silverman

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To join our LbM group page, send email to lynnc@universe.sonoma.edu.