**Challenged Based Learning in Action Workshop** (Speakers: Ms. Debbie Liberi, District Coordinator and Ms. Julie Steimle, Project Director, CEEMS MSP; Date: July 22; Time: 9:00-10:30 AM)

Ms. Debbie Liberi earned BA in Biology at Wittenberg University and a Masters in Secondary Educations from UC, as well as, a Masters in Library and Information Science from Kent State University. From 2000-2010, Debbie was a National Board Certified Teacher in Early Adolescence Science. She also served as a lead teacher in various mentoring roles for CPS.

Ms. Julie Steimle received her Bachelor of Arts in English and Secondary Education from Thomas More College. Ms. Steimle has been with the University of Cincinnati since 2009. She initially coordinated UC’s Supplemental Educational Services Program. Currently, she is the Project Director of the Cincinnati Engineering Enhanced Math and Science Program.

The session began with Ms. Steimle introducing the focus of the workshop as the implementation of Challenge Based Learning. A discussion comparing Project Based Learning (PBL) and Challenge Based Learning (CBL) followed. Participants identified PBL as being teacher driven while CBL is student driven with greater student ownership and engagement. A video clip of CBL in a high school classroom was shown as an example of a student driven lesson.

The session continued with a discussion of the possible obstacles to using CBL within a standards based curriculum. Participants were given 3 minutes to discuss in small groups then shared out to the room. Participants identified the following obstacles: time, pacing, budget, change in thinking, attendance, and getting other teachers on board for interdisciplinary instruction.

Ms. Steimle then turned the floor over to Ms. Liberi. Ms. Liberi provided participants with two handouts, “CBL Planning” and “Bloom’s Taxonomy- Teacher Planning Kit” to be used as resources while planning CBL Units of instruction. She also reminded the audience of the CBL resources found on the CEEMS Wiki.

Ms. Liberi emphasized that CBL will increase student engagement because students are stakeholders and invested in the lesson. Gaining student buy in from the beginning of the Unit is imperative. While the teacher is responsible for choosing the Big Idea, the CBL process is student driven for the reminder of the Unit, beginning with students generating the Essential Questions. Ms. Liberi shared resources for guiding students in Essential Question development, including helping students recognize the criteria for what makes for a good Essential Questions. The key to student buy in is that students select the Essential Question that will be investigated.

A continuum featuring PBL at one extreme and CBL at the other extreme (see **Figure 1** below) was projected for the audience. Ms. Liberi tasked the audience with moving a PBL lesson covering the content of energy transformer, light energy, and geometry by having students construct solar cookers to a CBL lesson. Participants brainstormed in small groups and shared out. Suggestions included presenting the students with a Big Idea surrounding food prep during a natural disaster or how to cook food without using electricity or fire. Students would also be tasked with designing the solar cooker and not just building it from a kit. A discussion comparing the difference between the PBL and CBL approach to the same content followed. Audience members recognized that CBL leads to increased student engagement.



**Figure 1: Ms. Debbie Liberi Projects Slide from PowerPoint Showing Continuum with PBL and CBL on Different Ends**

Ms. Steimle returned to the floor to discuss the importance of the Hook in CBL. A video featuring CEEMS teacher, David Macmorine’s, 3rd CBL Unit was shown as an example of how the Hook will gain student attention and stimulate curiosity. He used a video, “Landfill Harmonic”, to introduce students to the Big Idea of his Unit and to stimulate interest. He shared the enthusiasm and improved achievement experienced by his students.

The audience participated in question and answer. Audience members provided feedback on the video clips, and the impact the session will have on their approach to implementing the CBL Units of instruction. The session provided participants with concrete examples of CBL and provided useful resources for use during planning and instruction.