**Technical Writing and Presentation Workshop** (Speakers: Ms. Valecia Kelly, Ninth Grade Team Leader, Building Representative, and Coordinator for Minorities in Math, Science, and Engineering, Shroder Paideia High School, Cincinnati, Ohio; and Ms. Barbara Kenney, CEEMS Teacher, UC; July 14, 2015, 9:00 pm–12:00 pm)

Ms. Valecia Kellyhas taught science for 26 years with Cincinnati Public Schools. She currently teaches 9th grade Biology at Shroder Paideia High School where she also serves as the 9th Grade Team Leader, Building Rep and High School Coordinator for Minorities in Math Science and Engineering. Valecia earned a BS in Biology from McPherson College, and a Teaching Certificate from the College of Mount Saint Joseph. She is a participant in the first cohort of the STEM Leadership Academy sponsored by Battelle. In addition, Valecia is the Executive Director of Christ Emmanuel Christian Fellowship CDF Freedom School®.

Ms. Barbara Kenney has been a middle and high school teacher for the past 22 years in both Kentucky and Ohio. The majority of her career has been spent teaching math in grades 7-12, but she has also served as a Gifted Intervention Specialist and more recently as a teacher on special assignment part-time in Curriculum and Instruction. Besides being a participant in the CEEMS program, her educational background includes a bachelor’s degree in both mathematics and secondary education, a master’s in mathematics education from Northern Kentucky University, and a Gifted Intervention Specialist Endorsement from the UC. She is currently a teacher in the Cincinnati Engineering Enhanced Math and Science (CEEMS) program at the UC, funded by a grant from the National Science Foundation.

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| **Figure 1: Team Building Exercise “Paper Cup Tower”** | **Figure 2: Cooperative Learning Activity, Building Warehouses** |

The session began with introductions of each of the speakers. The topic was Cooperative Learning and the speakers requested that each of the participants provide feedback on what they expected to get from the session.

Before starting the first activity, the participants were placed in groups. The speakers demonstrated a method for randomly selecting group members. The method demonstrated was the Snow Ball Fight. In this method, each participant receives a piece of paper with a shape, a number and a color. The participants wrinkle the paper into a ball and the “snow” balls are thrown around the room until the instructor tells everyone to pick one up and keep it. The participants then unraveled the balls and were instructed to join with others having the same number. An option to using numbers would be the color or shape on the paper. This would prevent students from trying to manipulate teams. Teams typically consisted of 4 members.

The first activity was a Team Building activity requiring each team to build the tallest tower possible from paper cups. The teams received 3 minutes to discuss options for the tower and then 5 minutes to build the tower. The idea was to allow the teams an opportunity to work together.

After the tower activity, the speakers provided information on the basic principles of group work. They described one set of principles as PIES which stands for **P**ositive interdependence, **I**ndividual accountability, **E**qual participation, and **S**imultaneous interaction. This method can also be used by team members to assess how well their group worked together.

A video was shown called “Measuring Up.” The video was a CEEMS video regarding a unit that was taught regarding measurements by Barbara Kenney.

The last activity required the same teams to “Build a Warehouse.” The Warehouse had specific requirements that had to be met, including 5 framed windows, two framed entry doors, a loading door, and a logo/sign. The first part of the activity required that each member fill out a profile card asking for specific information such as names of the team members, interests, and favorite subject amongst others. The team members were then to use this information to develop a name for their warehouse/team. The next step required the team members each take a role. The four roles available were Window Maker, Door Maker, Sign/Logo Maker, and Building Architect. Each role had specific responsibilities and tasks they had to complete.

The team was given a specific amount of time to develop a plan for their building. Supplies included a shoe box, craft sticks, toothpicks, glue, scissors and paper were available. After the plan was developed, the members of the team were separated and each member was to complete their piece of the warehouse. Members were only able to communicate through Google Docs and expected to work on their part without verbal communication with other team members. After a given period of time the members came back together to assemble their warehouse. Upon completion of the warehouse, the member developed a PowerPoint based on directions from a rubric. Each role had specific expectations for the power point slide they were to develop. The members then presented their warehouses and PowerPoints to the class including what went well and what did not go well. The other participants were expected to rank the presentations.