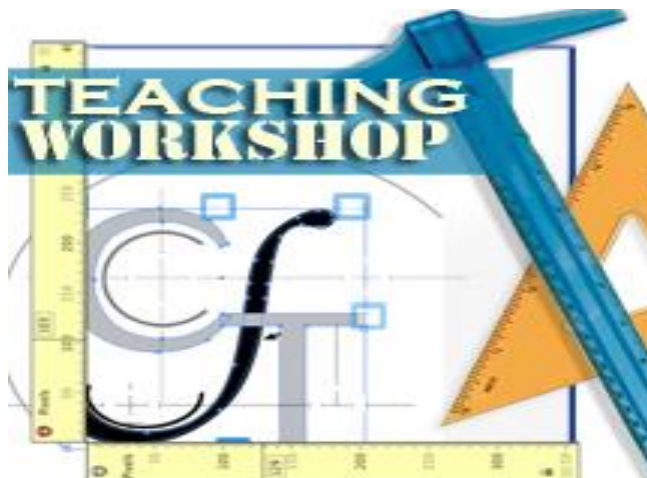


Society for Analytical Chemists of Pittsburgh (SACP) &
Spectroscopy Society of Pittsburgh (SSP)
Present

More Target Inquiry Lessons for Teaching Chemistry

Presented by: Dr. Ellen Yeziarski (Miami Univ.), Ms. Alice Putti (Jenison H. S., MI),
Mr. Brett Becker (Madeira H. S., OH), Ms. Stephanie Kimberlin (Live Oaks CTC, OH)



Date: Saturday, April 13, 2019
Time: 8:30 AM – 1:30 PM (+ free lunch)
Location: Sewickley Academy
315 Academy Ave.
Sewickley, PA 15143

Complete the form below and submit a check for \$10.00 payable to SACP and send to Ms. Amy Bovino, c/o SACP, 300 Penn Center Blvd., Suite 332, Pittsburgh, PA 15235, by April 8, 2019. Registrants who attend the program or cancel their space by April 8, 2019 will have their check returned to them. Attendees will receive course materials and can get Act 48 credits.

Name _____ Phone No. _____

School _____ E-mail address _____

About Target Inquiry and this workshop

How to Pursue a Red Ox (presented by Brett Becker)

This inquiry activity has been developed to facilitate students learning the theory of oxidation reduction reactions. The activity addresses the macroscopic changes that can occur and links these with the symbolic and particulate representations, all while combatting common misconceptions around these reactions. Additionally, a linked novel assessment was developed that was designed to facilitate learning as a part of the assessment itself.

Brett Becker has taught chemistry for 17 years, the last 13 at a public high school near Cincinnati OH. His participation in the Target Inquiry at Miami University cohort led him to produce two activities provided in their resources.

MyAcid Can Beat Up Your Acid (presented by Alice Putti)

Most laboratory activities rely on macroscopic observations and do not help students build accurate particulate level models of phenomena. This activity will address acid ionization on a particle level, helping students understand the difference between a strong/weak acid and a concentrated/dilute one.

Since 1995, Alice Putti has taught mainly Chemistry and AP Chemistry at Jenison High School in Jenison, Michigan. She is a leader in the AP chemistry community working as a consultant, AP Reader, and a member of the AP chemistry Test Development Committee. In 2004, she was part of the first Target Inquiry Cohort, developing three guided inquiry activities that have been published in *The Journal of Chemical Education* and the *Science Teacher*.

Balancing the Particulate Way (presented by Ellen Yeziarski)

This activity focuses on helping students relate chemical equations explicitly to particulate representations. Students work with particle diagrams to develop an understanding of how to balance equations and the meaning of stoichiometry.

Ellen Yeziarski is a Professor of Chemistry in the Department of Chemistry & Biochemistry and the Director of the Center for Teaching Excellence at Miami University. She is the co-developer of the Target Inquiry program and has 26 years of chemistry teaching experience at the high school and college levels. She has contributed numerous articles on guided inquiry activities for teaching chemistry and chemistry education research to *The Journal of Chemical Education* and other journals.

It's All Relative (presented by Stephanie Kimberlin)

This activity focuses on helping students to develop an intuitive understanding of relative atomic masses and moles by modelling atoms using particles small enough to be handled in bunches, while large enough to be seen. The activity includes an assessment.

Stephanie Kimberlin has taught science for 25 years. She is currently teaching in the largest career tech district in Ohio, Great Oaks. She completed the TIMU program in 2016 and published one of the lessons presented here today, Balancing in a Particulate Way. She also developed the lesson "It's All Relative", and presented it at the 2018 Biennial Conference on Chemical Education. She currently lives on a farm in Kentucky with her family and teaches at Live Oaks CTC in Milford, Ohio.

Go to <http://www.targetinquiry.mu.org/> and gvsu.edu/targetinquiry for more info.