



26th Annual OCTC

# TIE Conference

Teachers, Industry & Environment Conference

## Wednesday, October 17, 2018

4:00-6:00 p.m. **Conference Registration**

5:00-6:00 p.m. **Welcome Dinner - *Sponsored by The Lubrizol Corporation***

6:15 p.m. **Shuttle Transportation to Ashland Chemical Company**

6:45 p.m. **Tour of Ashland Chemical Company**

Ashland Chemical Company is a global specialty chemical company that provides products, services and solutions throughout a variety of industries. The tour of Ashland Chemical Company provides conference participants an inside look at an operating chemical plant.

8:30 p.m. **Depart for Conference Hotel**

## Thursday, October 18, 2018

7:00 a.m. **Breakfast - *Sponsored by BASF***

7:45 a.m. **Conference Opening Remarks**

*Jenn Klein, President, Ohio Chemistry Technology Council*

7:55 a.m. **Introduction of Ashland University Graduate Credit Opportunity**

*Dona Rhea, Conservation Educator, Delaware Soil and Water Conservation District*

8:00 a.m. **Teaching Science with TOYS - *Presented by Husky Lima Refinery***

Unlock the mysteries of chemistry for your students by learning to use both homemade and purchased toys in your classes. Teachers will explore hands-on science activities that use toys and other common household items to teach the principles of scientific inquiry, physics and chemistry.

*Kathy Buescher, Husky Lima Refinery*

10:00-10:10 a.m. **Break**

10:10-11:00 a.m. &  
11:10-12:00 p.m. **Concurrent Sessions**

**Dancing Bubbles - *Presented by LyondellBasell and Solvay***

In this activity teachers will observe the relative densities of household liquids, like syrup, oil and alcohol and solids, like plastics, wood and paper.

*Amy Weiskittel, LyondellBasell*

**Project WET Sampler - *Presented by Ohio EPA***

On "The Incredible Journey," students simulate the movement of water molecules within the water cycle. "Ask the Bugs" simulates bioassessment of a stream, the way that Ohio EPA collects macroinvertebrates as an indicator of water quality.

*Jeff Montavon and Carolyn Watkins, Ohio EPA*



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## Thursday, October 18, 2018 (Continued)

**12:00-1:00 p.m.** Luncheon with OCTC Company Representatives - *Sponsored by PPG*

**1:00-1:15 p.m.** Break

**1:15-2:15 p.m.** Concurrent Sessions

&

**2:30-3:30 p.m.**

### **Paper Chromatography: Be a Color Detective - Presented by Covestro**

We see objects because they reflect light into our eyes. Some molecules only reflect certain colors. We will demonstrate to participants how they can use Paper Chromatography to separate the parts of a solution. We will find out if black ink is really black, or if it is a combination of different colored molecules that our brains perceive as being black. We will also experiment with other colors of ink to determine whether or not a given color of ink is a single colored molecule, or a combination of different colored molecules.

*Mel Van Balen, Jeremy Bennett, Chris Pettit, Tim Frisch, Jim Hamilton, Paul Prince-Wright, Covestro*

### **Blast Off with NASA BEST Next Generation Engineering Design Challenge**

- *Presented by NASA*

Teaching Force and Motion has never been so much fun. NASA's BEST Next Generation Engineering Design Challenge will take propulsion to a new level. We will complete the Green Propellant Infusion Mission challenge by designing and building a simple spacecraft and "green" spacecraft propellant.

*Susan Kohler, Education Specialist, NASA*

**3:30 p.m.** Break - *Sponsored by Perstorp Polyols, Inc*

**3:30-4:30 p.m.** Frosty Break - *Presented by LyondellBasell*

Liquid Nitrogen Fun!

*Amy Weiskittel, LyondellBasell & Karl Schnapp, BASF*

**4:30 p.m.** Ashland University Reflection

This session is offered to those interested in obtaining 1 semester hour of graduate credit through Ashland University. The fee for the credit is \$190.00. Participants will work with an Ashland University facilitator on a reflection of the sessions attended during the conference, and how to incorporate what was learned into their curriculum.

*Dona Rhea, Conservation Educator, Delaware Soil and Water Conservation District*

**4:30 p.m.** Evening on Your Own



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## Friday, October 19, 2018

**7:00 a.m.**                    **Breakfast - Presented by American Chemistry Council's Chlorine Chemistry Division**

**7:45 a.m.**                    **Opening Remarks**  
*Jenn Klein, President, Ohio Chemistry Technology Council*

**8:00 a.m.**                    **Science Takes Flight, From Blueprints to Blue Skies - The Carnegie Science Center**  
Your future is cleared for takeoff! Learn how innovative aircraft fly off the drawing board and into the sky as you take a spin on our hovercraft and feel the fiery roar of propulsion chemistry.  
*James Falba, The Carnegie Science Center*

**9:00-9:10 a.m.**            **Break**

**9:10-10:00 a.m.**        **Concurrent Sessions**

**& 10:10-11:00 a.m.**

**Bouncy Balls: The Science of Polymers - Presented by LyondellBasell**  
Why do some balls bounce higher than others? Why do diapers absorb so much liquid, do all plastics repel water? The basic concepts of plastics (polymers) including the properties of plastics and their many uses will be discussed.  
*Amy Weiskittel & Jan Galbraith, LyondellBasell*

**Real Industrial Concepts as Student-Friendly Experiments - Presented by Solvay**  
Discover some of the processes that chemical companies must be knowledgeable about when they design and operate their plants. Participants will model the concepts by completing hands-on experiments that can easily be brought back to their classrooms. They will learn how these ideas are used in real world applications, and they will observe how severe the consequences can be when the hazards are not properly understood or mitigated.  
*TBD, Solvay*

**11:00 a.m.**                    **Looking for Life on Mars: NASA Mars Exploration Program - Presented by NASA**  
How do we know if something is alive? Use scientific inquiry to develop an operational definition of life and then use the fundamental criteria for life to examine mystery soil samples for signs of life.  
*Susan Kohler, Education Specialist, NASA*

**12:15 p.m.**                    **Conference Closing Remarks**  
*Jenn Klein, President, Ohio Chemistry Technology Council*