31st Annual OCTC

TIE Conference

Teachers, Industry & Environment Conference

Wednesday, October 16, 2024

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 17, 2024

7:00 a.m. **Breakfast – Sponsored by BASF Corporation**

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**
Linda Pettit, Ashland University

8:00 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? Why can't we recycle everything? What does it mean to be sustainable? The basic concepts of plastics (polymers) including the properties of plastics and their many uses will be discussed as well as recycling and sustainability.
Amy Weiskittel, Jan Galbraith, and Ankita Paul, LyondellBasell

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 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.
Kelydra Welcker, Bonnie Bishop, and Puxiang (Sookie) Yu, Solvay

Session TBA – *Presented by Ohio EPA*
TBA
Ohio EPA

12:00-1:00 p.m. **Lunch**

1:00-1:15 p.m. **Demonstration of StartSOLE**
Self Organized Learning Environments (SOLE) is a simple educational approach designed to promote inquiry and foster self-empowerment. Learn how to use technology to implement this revolutionary method to let learning happen.
Jeff McClellan, StartSOLE

Thursday, October 17, 2024 (Continued)

1:15-2:15 p.m. & 2:30-3:30 p.m. — **Concurrent Sessions**

Plastics in Industry & Environment – *Presented by Covestro*
Through a series of interactive demonstrations, participants will experience the stages of plastics manufacturing, including polymerization, extrusion, molding, quality analysis, and recycling. Participants will demonstrate polymer reactions, participate in a live color matching process, and experience tabletop-scale representations of extrusion, molding, and quality analysis processes. Participants will also be introduced to information on the career opportunities and education requirements in the industry.
Jim Hamilton, Adam Houdeshell, Sarah Boes, Derek Fulk, Grant Stokes, Alec Miller, Drew McDaniel, Covestro

Exploring Energy – Presented by SESA
Teachers will explore various types of energy. Participants will use components to build different types of circuits. This activity will focus not only on teaching the topic but applications in real life and industry.
Rachel Smith, SESA

3:30 p.m. — **Snack Break**

3:30-4:30 p.m. — **Foodology – Sponsored by Univar Solutions**
Food Science belongs in your classroom. We will explore trends, careers and create some edible fun.
Hopeton Watson, Univar Solutions

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 $200. 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.
Linda Pettit, Ashland University

4:30 p.m. — **Evening on Your Own**

Friday, October 18, 2024

7:00 a.m. — **Breakfast – Sponsored by American Petroleum Institute (API) Ohio**

7:15 a.m. — **Opening Remarks (During Breakfast)**
Jenn Klein, Ohio Chemistry Technology Council

8:00 a.m. — **STEM Learning Opportunities That Come to You – API Ohio**
API will present their new Mobile Energy Learning Unit (MELU) program. The program is part of API's commitment to advancing science, technology, engineering and math (STEM) education by engaging students in activities that offer a window into exciting careers in the energy sector. The MELU's six mobile units help teach students in grades

about STEM, touching on energy careers, including engineer, chemist and mechanic. Each unit features 24 individual activities, ranging from identifying microorganisms (petroleum's building blocks) to operating a robot arm.

8:15 a.m.

Thriving In an Ever-Changing World: The Intersection of STEM and Entrepreneurship
In today's rapidly evolving world where 65% of jobs may become obsolete by the time today's students enter the workforce, it is imperative that we prepare our students with the necessary STEM and entrepreneurial skills for success. The top workplace skills for 2025 are projected to be analytical thinking, innovation, complex problem-solving, creativity, originality, and initiative. Combining STEM education with entrepreneurship builds these essential skills while also enabling students to explore their purpose and passion. We will actively engage educators as we explore creative ways to integrate entrepreneurship through skill-building into your current STEM practices.
Elizabeth Chois and Jessica Dragar, Young Entrepreneur Institute

9:30-9:40 a.m.

Break

9:40-10:30 a.m.& 10:40-11:30 a.m.

Concurrent Sessions

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.
Kelydra Welcker, Bonnie Bishop, and Puxiang (Sookie) Yu, Solvay

Session TBA

11:30 a.m.

Survivor SESA Style: You are Stranded on a Desert Island – Presented by SESA
So begins the SESA Tech Challenge. Guided by the SESA crew, participants will use the materials provided to design and construct tools to attract a boat and be rescued. This session encourages higher level thinking skills and the creative use of technology.
Rachel Smith, SESA

12:30 p.m.

Conference Closing Remarks
Jenn Klein, Ohio Chemistry Technology Council

Departing Gifts Presented to Teachers
Swag Bags – Capital Resin Corporation
Swag – *All Company Sponsors*
Snack Box To Go
Gift Card – *All Company Sponsors*
Certificate of Completion – *All Company Sponsors*