



JASON Regional Conference

August 8-10

Breakout Session Descriptions

August 9, 2022 (Day 1)

***Choose Between the All-day Training Session or Breakout Sessions**

All-day Special Training Session! (9:50am-4:00pm)

Sensors are Essential (Arduino)(Grades 8-12) May be modified for grades 6-7. Rm 119

In the Sensors are Essential Module, students will be introduced and begin to explore the amazing world of digital sensors using an Arduino System. They'll learn about: electronic components, interpreting circuits & schematics, basic programming syntax, microcontrollers, and data collection/analysis. After completing all the activities in this module, students will be challenged to create and program a digital temperature sensor that will alert someone when the temperature gets too hot or too cold. *This module is designed to launch students on a pathway towards earning an Arduino Certification as well as support career pathways in Advanced Manufacturing.* Click [here](#) to learn more.

OR

Breakout Sessions A (9:50-11:50am)

Roundtable Discussion: OH Workforce & Advance Manufacturing (Superintendents, Community Partners & Educators), Janell Comstock, Ohio Means Jobs Media Center

This roundtable discussion focusses on what employers and community partners see and need in the up-and-coming workforce. How can we as partners work to minimize gaps in the new crop of workforce entrants and maximize the valuable skills needed in today's growing economy? How can we work to create a talent pipeline to ensure self-sustaining wages for employees and a ready skilled workforce for employers?

Overview of JASON's Early Childhood Series (Grades PK-2) Rm 109

STEM is more than just an understanding of subjects. It includes habits of mind that are especially vital in the early childhood years: creativity, observation, communication and persistence. Join us for an overview of Our Early Childhood Collection includes three missions: STEM & Bloom, The Physics Fair, and Water, Wind and Weather - each equipped with a collection of hands-on investigations, outdoor exploration walks and activities, robust literature connections, "Picture Plays", interdisciplinary opportunities, and supporting resources for the guide.

JASON for Newcomers (Grades 3-12) Rm 110

New to JASON? Come join us for a walkthrough of the JASON platform and available curricula, and an overview of JASON's philosophy and approach to STEM learning. Participants will survey featured activities from a variety of curricula, and learn how to navigate the gated site including access to standard alignments and teacher resources. Trainers will share tools and search strategies to help educators find the resources best suited for their classroom situations. Participants will have time to explore and share.

Where's the Math? Featuring ARGO Algebra (Grades 6-12) Rm 100

Discover the opportunities for students to develop their understanding of mathematical concepts and engage in math practices through some of JASON's interdisciplinary curricula with math connections. We will highlight ARGO Algebra where students explore proportional relationships, linear graphing, slope, equations, and inequalities while designing an amusement park.

An Introduction to Design Thinking & JASON's Entrepreneurial Challenges (All Audiences) Rm 112

Real problem solving requires the intersection of multiple fields and disciplines. Get a quick "Design Thinking 101" tutorial and explore JASON's Design Thinking Collections including the Design & Pitch Entrepreneurial Challenges

where students adopt an entrepreneurial mindset and develop their 21st century skills. These challenges offer real-world problem-based opportunities for students to connect with the world, their communities, and each other.

Breakout Sessions B (1:00-2:15pm)

STEM Habits of Mind with JASON's Early Childhood Collection: STEM & Bloom (Grades PK-2) Rm 109

STEM is more than understanding subjects. It includes habits of mind that are especially vital in the early childhood years: creativity, observation, communication and persistence. Through the lens of gardening, STEM and Bloom is an interdisciplinary experience, bringing together art and science, math and literature, bounty and beauty.

Overview of JASON's Recycling Activities Collection (Grades K-8) Rm 110

Designed in partnership with The Institute of Scrap Recycling Industries (ISRI), this collection invites students to explore the benefits and challenges of sustainable recycling through a variety of activities ranging from physics and chemistry to engineering and human impacts, while becoming informed citizens and careful consumers. Educators will sample selected activities and share ideas around implementation.

Explore JASON's Life Science Themed Resources and Collections with Interdisciplinary Connections (Grades 6-12) Rm 112

Life Science comes alive through JASON's investigations, articles, videos, games, photo galleries and more. Join us for a basic overview of JASON's life science curricula with Interdisciplinarity connections. These collections explore ecology, environmental science, and biology while connecting with engaging STEM role models in the field and career pathways. This session will include navigation, a sampling of activities to illustrate the multi-media approaches, time to explore collections, and discussion and Q&A around implementation.

Introduction to JASON's CTE Collection: HVAC; Broadband Internet; Civil Engineering (Grades 8-12) Rm 100

Join us for an overview of JASON's recently launched Career and Technical Education Modules: Internet for All (broadband technology); Keeping You in the Comfort Zone (HVAC), and Designing to Make a Difference (civil engineering). Featured STEM professionals bring relevancy and connect students to real-world experiences. Each module ends in a culminating design challenge where students put their knowledge to the test while applying design thinking principles and using science and engineering practices.

The Workforce and Opportunity Act (WIOA) and OhioMeansJobs Centers Media Center

What is [WIOA](#) and the [OMJ](#) Centers? This session will focus on the services and resources offered to individuals and youth in the community and schools.

Breakout Sessions C (2:20-3:35pm)

STEM Habits of Mind with JASON's Early Childhood Collection: The Physics Fair (Grades PK-2) Rm 109

STEM is more than understanding subjects. It includes habits of mind that are especially vital in the early childhood years: creativity, observation, communication and persistence. The Physics Fair takes young explorers on an adventure to observe and test their environment with Isaac Newton. Young learners explore light and forces and interactions through the lens of theme parks and playgrounds!

Dive into JASON's Immersion Learning Adventure Series (Grades 3-5) Rm 110

Immersion Learning is a collection of 8 Adventure Series designed to help youth succeed in science, math, and literacy while using technology and engineering to explore real world phenomena. Immersion Learning takes students around the world from Monterey Bay's National Marine Sanctuary to the polar extremes of the Arctic and Antarctica to explore the world's natural resources and the tools and technology scientists use to understand them. Each series includes an expedition overview, hands-on activities, articles, videos, games, and career connections to

real scientists and their research. We'll explore some of the lessons and activities particularly suited for elementary.

Overview of the JASON Coaches Program (Grades PK-12) [Rm 100](#)

Join us for an overview of the JASON Coaches Program and hear how you can join the next cohort that begins in October! Coaches serve as ambassadors between JASON and their district or school, facilitate localized professional learning experiences, connect with a network of peers from across the country, gain access to a digital library of training resources, and more!

Explore JASON's Physical Science Themed Resources and Collections with Interdisciplinary Connections (Grades 6-12) [Rm 112](#)

Forces & motion, energy, waves, and how we define standards of measurement across disciplines all come alive through JASON's investigations, articles, videos, games, photo galleries and more. Survey JASON's physical science collections: Terminal Velocity, World of Waves, Infinite Potential, and Universal Constants and access standard alignments to locate resources you can integrate into your units this year. Participants will engage in selected activities from these collections

OhioMeansJobs (OMJ) Reality Stop - Virtual Reality Career Exploration & Training (Grades 9-12) [Media Center](#)

Virtual Career Exploration and Training that can support a variety of disciplines, such as Manufacturing & Construction, Automotive, Hospitality and Tourism.

August 10, 2022 (Day 2)

***Choose Between the All-day Training Session or Breakout Sessions**

All-day Special Training Session! (9:50am-2:30pm)

Details Make All the Difference - All-day (Grades 8-12) May be modified for grades 6-7. Rm 119

In the Details Make All The Difference Module, students will be introduced and begin to explore the amazing world of Advanced Manufacturing. They'll learn about: Industry 4.0 technologies, engineering design, the digital thread, and precision measurement. After completing all the activities in this module, students will be challenged to innovate and create a product that increases the functionality or value of an existing product used by someone in your community. *This module is designed to launch students on an Advanced Manufacturing Career Pathway and begin to equip them with the knowledge and skills needed to earn a Certified Production Technician (CPT) Certification.* Click [here](#) to learn more.

OR

Breakout Sessions D (9:50-10:50am)

Best Practices & Share Session: JASON's Early Childhood Series (Grades PK-2) Rm 109

Join us and a panel of educators who have used JASON's Early Childhood programs with students. Panelists will share their experiences with the program using specific examples and share tips and strategies for implementation. Session includes time for question-and-answers and group discussion.

Best Practices & Share Session: JASON for Elementary (Grades K-5) Rm 110

Join us and a panel of educators who have used JASON programs in a K-5 setting. Panelists will share their experiences with the program using specific examples and share tips and strategies for implementation. Session includes time for question-and-answers and group discussion.

Best Practices & Share Session: JASON for Secondary (Grades 6-12) Rm 112

Join us and a panel of educators who have used JASON programs in a 6-12 setting. Panelists will share their experiences with the program using specific examples and share tips and strategies for implementation. ***This session has been merged with the Best Practices & Share Session: JASON & Math! Session*** includes time for question-and-answers and group discussion.

Safety & Security in the Cyberworld (Grades 4-12) Rm 100

Online safety and security are critical areas for all students to become digitally literate in. Exercising common sense will only get you so far in the cyberworld - students need to be explicitly taught about the inherent risks of being online and learn how to spot and safely avoid scams and misinformation, all while protecting their personal information. JASON's Think Digital collection is a great way to address ISTE standards.

Washington County Career Center's Mobile Equipment Display Outside Auditorium

Learn more about the opportunity to have the Mobile Equipment Trailer come to you and what it can offer your students. The Career Center will display the following:

- A [Table Top HVAC Trainer](#): The TU-805 Mobile Table-Top Air Conditioning & Refrigeration Trainer gives HVAC/R students hands-on experience before they go out in the field. With this training unit, students can easily make electrical measurements.

- **Acrylic Pump Trainer** - (Although not an exact model of the one WCCC has, [here is an example](#) of something similar): a see-through training model possessing many features which can be used to train operators on the workings of a disc pump. By manipulating the suction and discharge valves and the RPM's, students can demonstrate how this type of pump prevents cavitation and can handle a large amount of air entrained in the fluid (pseudo-cavitation/aeration).

* Note, please visit WCCC's Mobile Equipment Display also during lunch!

Breakout Sessions E (10:55-11:55am)

Guest Speaker - "Women in Industry", Elizabeth King, Machinist, Micro Machine Works, Inc.

Auditorium

Advanced manufacturing is for everyone. Hear from Liz King, one of Micro Machine Work's STAR machinists as she recounts the journey she's taken along her career pathway, the challenges and rewards of working in this field, and advice for educators encouraging females to persevere and find opportunities in the manufacturing industry.

Using Real World Scenarios to Engage Business in the Classroom (Tasha Werry, Allison Rickett, and Jordan Spence; Building Bridges to Careers) [Media Center](#)

Learn about a simple, straightforward process for connecting students to real world problem solving and community members while implementing a highly engaging teaching strategy.

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* Note, please visit WCCC's Mobile Equipment Display also during lunch!

Breakout Sessions F (1:00-2:15pm)

STEM Habits of Mind with JASON's Early Childhood Collection: Water, Wind & Weather (Grades PK-2)

[Rm 109](#)

STEM is more than understanding subjects. It includes habits of mind that are especially vital in the early childhood years: creativity, observation, communication and persistence. Water, Wind, and Weather takes young explorers on an adventure to investigate and experiment with the primal forces that nourish and shape our world as they design a plan to prepare for extreme weather.

Real-World Problem Based Learning (PBL) (Grades 3-12) [Rm 110](#)

JASON offers a multitude of problem-based learning opportunities for students to connect with the community and apply design thinking principles in a variety of STEM fields. Explore how to leverage JASON's Field Assignments and Design & Pitch Series to engage students in meaningful, real-world challenges.

ARGO Geometry: Tiny Houses! (Grades 6-12) [Rm 100](#)

Discover JASON's Geometry unit ARGO Math titled "Here's Looking at Euclid" to honor the Greek scholar and the mathematician. Euclidean geometry, the study of plane (two-dimensional) figures and solid (three-dimensional)

figures come alive as students solve a real-world challenge of designing a tiny, energy efficient home.

Explore JASON's Earth Science Themed Resources and Collections with Interdisciplinary Connections (Grades 6-12) [Rm 112](#)

Geology, weather, and climate all come alive through JASON's investigations, articles, videos, games, photo galleries and more. Survey JASON's earth science collections that explore earth's systems and processes and human activity and impact - and access standard alignments to locate resources you can integrate into your units this year.

Participants will engage in a sampling of activities from these collections and discuss implementation strategies.