



# STEM EDUCATION SHOWCASE '26

## April 11, 2026 | WPI Innovation Studio

**8:00 - 8:30** **Check-in, Continental Breakfast** (2nd Floor landing)

**8:30 - 9:10** **Share-a-Thon**

2nd Floor

Visit the many tables throughout the space to speak with educators about their resources and work they are doing to advance STEM education. See additional page for topics and presenters.

### **Research Experiences for Teachers (RET) Poster Session**

Stop by to learn more about the exciting research teachers conducted during the Research Experiences for Teachers (RET) at WPI last summer.

**9:10-9:15** **Welcome** (2nd Floor landing)

**9:15-10:15** **Session 1 Workshops**

Room 205

### **Fostering Effective Teamwork in the K-12 Classroom** (PK-12)

Anne Ogilvie, Director for Team Learning, Worcester Polytechnic Institute

Brian LaPointe, Classroom Grade 4/5 Educator, Ayer Shirley Regional School District

Teamwork is a powerful driver of student learning, yet it can be one of the most challenging practices for both educators and learners. This interactive workshop will provide PK-12 educators with practical strategies to more confidently incorporate teamwork into classroom experiences and equip students with the collaboration skills they need to thrive. Educators will explore the benefits and common challenges of teamwork and explore strategies to form teams, establish team agreements, structure group tasks, and guide productive dialogue.

Room 203

### **Translanguaging: Practical Strategies to Support Multilingual Learners in STEM** (PK-12)

Evelyn Larose, Science Program Director, Boston Public Schools

Step into the shoes of a multilingual student! Come experience a high-quality science task as a multilingual learner, through a hands-on lesson immersion activity in another language! Engage in translanguaging firsthand and walk away with practical strategies for supporting your multilingual learners.

I3 Labs

### **DESE AI Literacy Resources for Educators** (6-12)

Paula Moore, CS Policy Specialist

Alva Laster, Digital Literacy and Computer Science Content Specialist at DESE

Explore the Massachusetts Department of Elementary and Secondary Education (DESE) resources designed to help educators understand and teach AI literacy. This session, led by Paula Moore, former Digital Literacy and Computer Science Content Lead at DESE and member of the DESE AI Task Force, will guide participants through materials addressing AI fundamentals, bias and societal impact, and strategies for helping students engage thoughtfully with AI.

**10:15-10:30** **Break** (Network and Browse Share-a-Thon Tables)

## 10:30-11:30 Session 2 Workshops

### Room 205 **Lesson Plans Inspired by RET Research on the United Nations Sustainable Development Goals** (6-12)

Abbey Prisby, Debbie Baird, Demetrios Kennedy, Em Beeler, Jared Quinn, Jessica Drozd, Michael Nixdorf, Tiffini Cornock

Pre-service and in-service teachers in the 2025-26 cohort of the Research Experience for Teachers program at WPI share their lessons and research inspired by the United Nations Sustainable Development Goals. The authentic research experience provided context for teaching “integrated STEM” and inspired ways to engage students in classrooms.

### Room 203 **Authentic Family Engagement: Moving from Participation to Shared Decision-Making** (PK-12)

Déborah L. González, Ph.D., Supervisor Translation & Interpretation Services, Worcester Public Schools  
Renata French & Xolchit Polanco-Roman, Wraparound Coordinators  
Yolanda Barboza-Abarca, Interpreter  
Perla Gillitlie, Volunteer

Family engagement is often misunderstood as attendance at events or compliance with paperwork. In this interactive panel session, leaders from Worcester Public Schools — including a SEPAC parent leader, wraparound coordinators, and a Spanish interpreter — explore what authentic engagement truly looks like in practice. Using a real-world special education case scenario, participants will examine how language access, scheduling, power dynamics, and systems design impact family trust and student outcomes. Attendees will leave with actionable strategies to shift from outreach to partnership and from compliance to shared leadership.

### 13 Lab **What’s the Story? Data Literacy for the K-5 Classroom** (PK-5)

Tiffany Davis, K-5 Instructional Coach, Ashburnham Westminster Regional Schools

This session provides resources and strategies to help you identify grade-level milestones for data literacy and weave essential data literacy skills and concepts into the math and science lessons you already teach.

## 11:30-11:45 Break (Network and Browse Share-a-Thon Tables)

## 11:45-12:20 Keynote

### Rooms 203 and 205 **Balance, Belonging, and Becoming: Supporting Student Wellness in a Digital Age**

Richard Lopez, Ph.D., Assistant Professor of Neuroscience and Psychology

Digital media and artificial intelligence are reshaping how students think, connect, and make sense of themselves and their learning. Understanding how technology can strengthen and strain students’ mental health and wellbeing invites us to reimagine our roles as educators. K-12 education can become a place where students feel grounded, supported, and empowered as they navigate increasingly complex digital landscapes. By acknowledging students’ lived experiences with technology and co-creating approaches that foster balance, belonging, and intentional learning, we can build environments that honor the whole student and help them thrive in both their academic journeys and their broader lives.

## 12:20-12:30 Closing | Rooms 203 and 205

Concluding remarks, reflections, and distribution of PDP certificates

## 12:45-2:00 Optional Post-Event: STEM-tastic Futures Await! Touch Future Tech at LEAP

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## Share-a-Thon | April 11, 2026

### Mass Audubon Education

Sarah Bertrand

We will share information about programming for PK-12 students and groups. [www.massaudubon.org](http://www.massaudubon.org)

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### Building a Community of Educators

TJ Noviello

View highlights of the work the WPI Physics Teacher Advisory Group (TAG) has done over the years and how we have successfully built a supportive community of educators.

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### Massachusetts Association of Science Teachers

Annie Haven and Rebecca Audette

The Massachusetts Association of Science Teachers (MAST) is a professional organization dedicated to improving science education at all levels. MAST is the state chapter of the National Science Teachers Association (NSTA) and acts as your representative on national and state policies concerning science education. In fact, NSTA national conference is coming to Boston in March of 2027, so we want to get people excited for that!

[www.massscienceteach.org/](http://www.massscienceteach.org/)

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### STEM PBL in Early Childhood Education

Suchira Channoi

Learn about Seeds of STEM and early childhood Project-Based Learning. Explore documentation of children solving real-world problems, building critical thinking and confidence as young scientists and engineers.

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### I am STEM Lesson Library (PK-7)

Lee Burgess, Sara Donovan and Jane O'Connor

Stop by to explore the "I am STEM" lesson library! All lessons follow the engineering design process, guiding students to solve standards-aligned problems in storybooks! <https://wp.wpi.edu/iamstem/>

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### Teacher Prep Program

Jillian DiBonaventura and Jamie Ramsdell

We table to raise interest in educators joining us as mentor teachers or program supervisors. Come learn more about how we are preparing the next generation of STEM educators. <https://tinyurl.com/WPITeacherLicensure>

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### WPI's Graduate Programs for Educators

Mia Duboarsky and John Goulet

WPI's advanced degrees for educators include the MS in Integrated STEM Education, MS in Math for Educators, MS in Physics for Educators, and the Grad Certificate in Cybersecurity. Ask about the discounted tuition, flexible schedule, and accommodation for teachers.

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## Share-a-Thon | April 11, 2026

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### Professional Learning with the STEM Education Center

Roxanne Donahue

Stop by to see the latest professional learning opportunities available this summer and learn about the opportunity to bring PL to your school or district. Highlights include AI in STEM, Teamwork, Supporting Diverse Learners, PBL and OpenSciEd! <https://www.wpi.edu/academics/stem-education-center>

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### Building Strategic Thinking with Graspable Math

Erin Ottmar

We will share our current research and technology development that supports teachers and students think flexibly when using Graspable Math (<https://activities.graspablemath.com/>).

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### Plotwise: A Tool to Improve Interest and Connection-Making in Statistics

Stacy Shaw

Statistics can be a challenging subject, as it requires students to make connections across formulas, data, output, and graphs. **PlotWise** - a dynamic interactive visualization technology- helps students and teachers build these connections and enhances interest in Statistics.

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### Incorporating Science Fair into a Science Curriculum

Kevin Crowthers

WRSEF is an organization that supports teachers and students in the science fair process. Receive material resources and guidance on the benefits of introducing science fair into a curriculum or after-school activity.

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### Inside DESE: STEM-in-Motion

Alva Lasterand and Meto Raha

The Massachusetts DESE advances STEM through science and math curriculum implementation, expanded access to advanced coursework, CTE pathways, and statewide assessments. By integrating DLCS, educational technology, and health education DESE promotes well-rounded and future-ready learning for all students.

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### Pipetting Pigeon

April Blodgett and Robin Ross

The Pipetting Pigeon re-homes lab supplies from closed biopharmas into high schools and colleges in New England, free of charge. [www.linkedin.com/in/aprilblodgett](http://www.linkedin.com/in/aprilblodgett)

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### NEACT Summer Conference

Kathleen Siok, Mary Madden and Kristen Vanderveen

Learn about the New England Association of Chemistry Teachers (NEACT) summer conference being held at WPI in early August (and check out the free giveaways!) [www.neact.org](http://www.neact.org)

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## Share-a-Thon | April 11, 2026

### **Catalyzing Belonging in Chemistry with Graphic Novels**

Anita Mattson and Raul Orduna Picon

Stop by our table to discover a new approach to chemistry education — graphic novels designed to lower barriers, spark curiosity, and catalyze belonging in STEM.

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### **STEM at African Community Education (ACE)**

JP Perkins

Learn about ACE and checkout displays and models from some of our STEM classes.

[www.africancommunityeducation.org](http://www.africancommunityeducation.org)

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### **EcoTarium Museum of Science and Nature**

Brendan Cole

Learn more about the EcoTarium's interactive programs, demonstrations, exhibits, and events. [www.ecotarium.org](http://www.ecotarium.org)

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### **Creative Coding with Wipple and Type Circuits**

Wilson Gramer

Wipple ([www.wipple.org](http://www.wipple.org)) is a free creative coding platform for K-12 students. Type Circuits is my new hands-on computer science activity that makes students' thinking visible. Come try a demo of each and share your feedback!

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### **XRP robotics for STEM**

Brad Miller

See the XRP robot co-developed by WPI and how it can be used for teaching STEM with high engagement of students. Take a look at the robots and sample student projects and available resources.

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### **WPI Opportunities**

Pick up information about the K-12 student offerings by the WPI Pre-Collegiate Outreach Programs (<https://tinyurl.com/pre-collegiate>) and WPI Admissions (<https://www.wpi.edu/admissions/undergraduate>).

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### **Central Massachusetts STEM Network (CMSN) Ecosystem**

Rachelle Lappinen

Learn how we support PreK-12 schools and educators through meetings, coordination of STEM Week each October, and providing a free lending library of STEM Kits. <https://wp.wpi.edu/cmsn/>

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### **ExGen: Building Career-Connected Learning Through Teacher Externships**

Erin Conley

ExGen connects educators with local employers for externships that build teachers' understanding of real workforce needs and strengthen classroom-to-career connections. Educators translate their experience into career-connected lessons and projects that embed durable skills and expand student access to their community and authentic learning. [www.bveducationfoundation.org/exgen](http://www.bveducationfoundation.org/exgen)

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# STEM EDUCATION SHOWCASE '26

## Poster Session | April 11, 2026

### Research Experiences for Teachers (RET): Engineering for People and the Planet

Stop by to learn about the exciting research addressing the United Nations Sustainable Development Goals (UN SDGs) conducted by WPI pre-service and in-service teachers at WPI last summer. (Note that they will be sharing their RET lesson plans as a workshop during the Session 2 in Room 205.)

#### 2025 Projects

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#### Magnesium Production and Recycling for Clean Energy

Jared Quinn, Ashburnham MS / MS Life Sciences  
Demetrios Kennedy, WPI Chemistry / HS Chemistry

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#### Antibiotic Resistance in Mycobacteria

Abigail Prisby, Groton-Dunstable HS / HS Biology  
Em Beeler, Worcester HS / HS Math

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#### Removing PFAS from Contaminated Soils

Tiffini Cornock, Carver MS/HS / HS Chemistry  
Jesse Drozd, WPI Chemistry / HS Chemistry

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#### Engineering Bench-Top Testing of Interventional Devices for Cardiovascular Diseases

Deborah Baird, Broad Meadows MS / MS General Science  
Michael Nixdorf, WPI Applied Physics / MS Math

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