



Jan 7 2026 **News, Resources, & Notes**

this issue

Upcoming Events:

1. Northwest Ohio Regional Technology (NORTech) Robotics Competition, March 5, BGSU
2. ITEEA Annual Conference, March 25-28, 2026. Virginia Beach
3. National Robotics Challenge, April 16-18, 2026. Marion
4. OTEEA School Exhibits and Restoration Innovation Challenge, April 17, 2026, Marion

OTEEA webinars [online archive](#)

OTEEA News, Resources, and Notes [online archive](#)

STEM is Elementary [Newsletter Subscription And Archived Issues](#)

[STEM competitions and more resources](#) spreadsheet

[Link to OTEEA membership form](#)



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Northwest Ohio Regional Technology (NORTech) Robotics Competition

Registration is now open for the **Northwest Ohio Regional Technology (NORTech) Robotics Competition**, part of the [National Robotics Challenge](#) (NRC)! This annual event provides an incredible platform for students to showcase their engineering skills and compete in a variety of robotics challenges.

Who Can Participate?

Students in **grades 6–12** from Ohio and surrounding states, including homeschool students, are welcome to join.

Event Details:

- **Date:** Thursday, March 5, 2026 (Snow Date: Thursday, March 12, 2026)
- **Time:** 9:30a – 2p (competitions start closer to 10)
- **Location:** BGSU Student Union
- Registration Deadline: Friday February 13th (guaranteed t-shirt)

Late Registration Monday February 23rd (t-shirt not guaranteed)

- **Lunch:** Lunch is **not provided**. Please plan to bring a brown-bag lunch; space will be available for eating.
 - We hope to have an update about sponsoring a lunch for all students, teachers & volunteers. For now, please plan to bring a lunch or lunch money for the BGSU Student Union Falcon Nest Cafeteria

 [Register Now](#)

- You will be able to update your registration until February 13th.
- A link to update will be provided in your confirmation e-mail. This way you can tentatively register early and go back to fill in student t-shirt sizes at another time.

[Learn More](#)

Don't miss this opportunity to inspire creativity, innovation, and teamwork among your students!

If you have any questions, [feel free to reach out](#). We look forward to seeing your students and their amazing robots in action!

This is a great opportunity for students to get ready for the NRC coming April 16-18. The events at NORTech are a mix of events to help students develop their skills through meeting goals that are a part of NRC events and some of the NRC events.

Let's make this year's NORTech Robotics Competition the best yet!

ITEEA Announces 2025-2026 STEM School of Excellence Awardees

RESTON, VA, December 18, 2025 – ITEEA is thrilled to announce the recipients of its **2025-2026 STEM School of Excellence Recognition**, honoring outstanding schools and universities that have demonstrated a commitment to providing a robust Integrative STEM education program and are truly **"Making Waves"** in their field.

[Saint Joseph Academy](#), Cleveland, OH was recognized as a 2025-2026 STEM School of Excellence. Congratulations!

This recognition is a testament to the dedication and innovation of educators, administrators, and stakeholders who strive to deliver meaningful Technology, Engineering, and STEM education to their students, harnessing the **forces advancing** technology, engineering, and STEM learning. Schools receiving the award have undergone a rigorous application process, showcasing their exemplary STEM programs and best practices. The recognition not only highlights their achievements but also serves as an inspiration for other institutions to enhance their own STEM education initiatives as the **tides shift** in modern pedagogy.

ITEEA's STEM School of Excellence recognition underscores the importance of STEM education in today's rapidly evolving world and highlights the critical role that schools play in nurturing the next generation of innovators and problem solvers. By recognizing and celebrating these exemplary institutions, ITEEA aims to promote the adoption of effective STEM education practices across the globe and encourage educators to **dive into** what's next in the field.

They and other PreK-12 schools and colleges/universities will officially be awarded a banner to display in their school at **ITEEA's 88th Annual Conference** to be held **March 25-28, 2026, in Virginia Beach, VA**. Consider entering your school for [ITEEA's STEM School of Excellence](#) recognition next fall.

STEM NEXT Asset Package



This quarter's Asset Package is filled with professional development opportunities and fun youth activities from January through March as we celebrate Mentoring Month, Crayola Creativity Week, Engineers Week, National AI Literacy Day, and more!

If you're new to our distribution list, the STEM Next Asset Package is a compilation of opportunities, resources, and tools designed to help out-of-school educators develop their skills while inspiring their kids to get curious and build a love for STEM.

Dive into the [January-March Quarterly Asset Package](#) and explore what's available this quarter!



How Do Airplanes Actually Fly?

[TED-Ed](#)

By 1917, Albert Einstein had explained the relationship between space and time. But, that year, he designed a flawed airplane wing. His attempt was based on an incomplete theory of how flight works. Indeed, insufficient and inaccurate explanations still circulate today. So, where did Einstein go wrong? And how exactly do planes fly? Raymond Adkins explains the concept of aerodynamic lift.

[Watch video](#)

TED Talks Tech

TED has several newsletters which can be [subscribed to here](#). One of them is TED Talks Tech. Every two weeks, they'll send you the latest tech news and reflections on how it impacts the way we live. You can expect:

- TED Talks that help make sense of the headlines
- Podcast episodes to explore the latest in tech
- Deep dives on how AI impacts everyday life
- And more!

OETC Is Introducing Certification Sessions.



These are extended, hands-on learning experiences designed for educators who want more than traditional professional development. In these sessions, participants complete required coursework, assessments, or performance tasks onsite and leave with a recognized certification.

Certification Sessions feature hands-on, guided learning with clear completion requirements. These are not overview sessions. If you want a

credential you can use immediately, this strand was built for you.

Certification opportunities include **SchoolAI**, **SACA Silver-Level Certification with Buckeye Education**, **MagicSchool**, and **Seesaw**. Space is limited and available on a first-come basis.

[Find out more about these certification sessions and start planning your experience today!](#)

[myOETC.org](#)



There is still time to register for OETC 2026!

Get ready to connect, learn, and be inspired at OETC 2026, happening February 10–12, 2026, at the Columbus Convention Center in Columbus, Ohio. Serving the entire P–20 EdTech community, OETC brings together educators, IT professionals, leaders, and library/media specialists to explore the latest innovations in educational technology. This is your chance to gain fresh ideas, collaborate with peers, and discover new ways to ensure access and foster meaningful learning through technology.

[View the schedule](#) and don't miss your opportunity to be part of a dynamic community shaping the future of education!

[Register Now!](#)



ITEEA News



Here's a look at what's new at the **ITEEA Annual Conference 2026**, all designed to give you more practical ideas, stronger connections, and real takeaways you can use back home.

What you can expect:

- Kick things off early at our Opening Reception on Wednesday, the day you arrive
- New Action Labs with ready-to-use classroom ideas presented by exhibitors
- A larger, more interactive Expo Hall, including ITEEAA's hands-on Activity Center
- Off-site networking at veterans'-owned Bunker Brew Pub with live local music (*ticket required*)
- A Closing Industry Panel focused on workforce trends shaping future STEM careers

Technology and Engineering Education News and Resources

Activities, Contests, Student Opportunities, and New Technologies

If you're looking for fresh ideas, hands-on learning, and meaningful connections, **this is the place to be.**

[Explore What's New for 2026](#)

Group Membership

The new ITEEAA group membership flyer is at the end of this newsletter.

Inside InvenTeams

[Lemelson-MIT](#)

Welcome to *Inside InvenTeams*, showcasing invention education in action through the eyes of high school inventors.

Welcome to the first edition of *Inside InvenTeams* for this school year. Teams were announced with great excitement and local fanfare at the end of October. They're busily researching and prototype building while developing their local invention ecosystem to support ongoing invention education in their communities for years to come. I'm sure you'll be inspired by this year's InvenTeams who seek to improve our lives through technological invention.

[Read more](#)



Trades Program Related to Digital Infrastructure

Nomad Futurist Society (industry digital media/data center group) has sponsored training program at Sandusky, Ohio. Interview of Mark Guskov on The Chavis Chronicles.

[Watch video](#) First there is an interview of Charles "Shorty" Garris in the music industry and education. The Guskov interview starts at 13:10.

Trivia Corner – Early Metal Lunch Pails

[Hilliard Ohio Historical Society Chronicle](#)



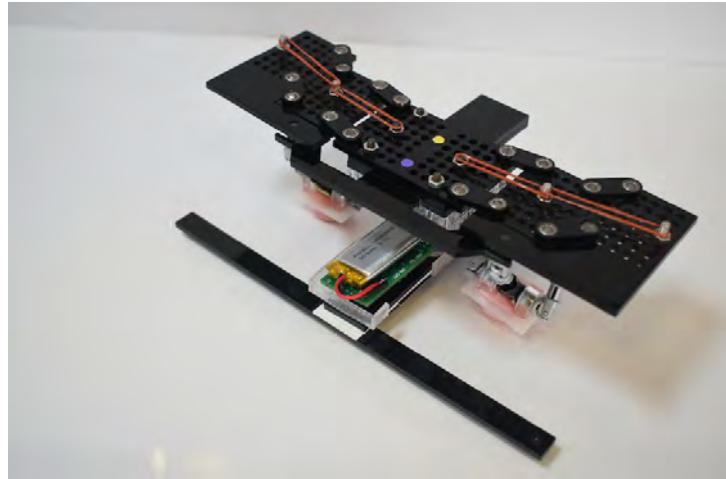
Before colorful lunch boxes and backpacks, many children carried their school lunches in **simple metal lunch buckets**. Common from the late 1800s to the early 1900s, these sturdy containers were especially important for rural students who traveled long distances to school.

Children's lunch pails were usually made of tin or steel and were plain in design—often round like a small bucket or rectangular with a wire handle. Some included a small inner container for soup or hot food. Because many looked alike, children sometimes scratched their names or initials into the metal.

Though simple, these lunch pails tell meaningful stories about daily school life, home-packed meals, and growing up in earlier generations.

Next time you visit our one-room schoolhouse in the village, please take time to look at the variety of lunch pails located on the back shelf. See if you can find the lunch pail shown above.

A Self-Steering, Beetle-Like Robot, Sans Electronics



A beetle-like robot from Harvard SEAS navigates obstacles without sensors or code, relying on elastic energy and joint geometry to mechanically decide how and when to move.

[ASME](#)

A new robot from Harvard's School of Engineering and Applied Sciences (SEAS) takes a minimalist approach to mechanical movement, using only rubber bands, levers, and carefully shaped joints to demonstrate a level of control and responsiveness that many roboticists typically achieve through electronics, computation, or sensing hardware.

"The idea isn't to counter computerization," said Leon Kamp, lead author on the research and a graduate student whose background spans

engineering and architecture. “It’s more of a different way of doing things—another item in the toolbox.”

[Read more](#)

Interesting Engineering

- [BlueBird 6: World's largest commercial comms satellite launched by Starlink rival](#) – The next-gen satellite aims to provide 5G smartphone coverage from space, rivaling SpaceX.
- [World's first solid-state battery motorcycle debuts at CES 2026 with 370-mile range](#) – able to charge to half its range in under 10 minutes
- [The Top Engineering Stories of 2025](#)
- [World's first underwater desalination plant uses ocean pressure to halve energy use](#) – It taps into natural ocean pressure to drive desalination, slashing energy use and greenhouse gas emissions by 50% compared to traditional land-based plants.
- [US Army's first 100% electric train can power rail centers for 48 hrs in emergencies](#) – Developed with Dominion Energy, the train can also act as a mobile energy platform during grid emergencies.

NEO:STEM Now Newsletters



Building the Future of STEM in Northeast Ohio

Connecting schools, businesses, and communities to inspire curiosity, develop future-ready STEM skills, and open doors to new opportunities.

[Read January 2 Newsletter here](#)

2026 Central Ohio STEM Expo

February 28, 2026

The Point at Otterbein University



Get Ready for a Fun Filled Day of Knowledge and Exploration!

The Central Ohio STEM Expo is a free educational outreach event for students in Kindergarten through 8th grade that will feature fun, interactive activities and exhibits in the Science, Technology, Engineering and Math fields.

[Read more and register](#)

Drones in School News



January races, upcoming nationals, advisor updates and more.

[Read full January newsletter](#)



Interesting Facts

- [How Astronauts Do Everyday Chores in Space](#)

The Kid Should See This

[The Kid Should See This](#)

Smart videos for curious minds of all ages

Here are some selected videos.

- [How is salt harvested from the sea?](#)
- [How are bells made at Taylor's Bell Foundry?](#)
- [Joseph's Machines recreates Wallace & Gromit's automated breakfast machine](#)

History Facts

- [Why Is 'Red Tape' Associated With Bureaucracy?](#)
- [Why Do Clocks Move Clockwise?](#)
- [6 Popular Foods That Came From the Military](#)

STEM Is Elementary

STEM IS ELEMENTARY

In honor of the parents, educators, administrators, program leaders, mentors, and peers who dedicate their life's work to supporting and inspiring young innovators and changemakers, we proudly dedicate the January issue of STEM is Elementary to you.



The January issue of STEM is Elementary is [available here](#). This group sends greeting cards to strangers.

ESC of Central Ohio Workshops

Introduction to Python with LEGO® Education Grades 6-12

February 17 & 18 plus 3 virtual sessions, Free

The ESC of Central Ohio, powered by LEGO® Education, is providing professional learning for Grades 6-12 educators in computer science to support the expansion of CS programs in PreK-12 schools that are aligned with Ohio state standards. Teachers will leave with a Free LEGO® Education SPIKE Prime set, a SPIKE Prime Expansion set. This course is provided at no cost to any currently licensed teacher in Ohio!

[Read more and register](#)

Computational Thinking and Creativity: Designing Projects for Gifted Students with Ozobot

February 24 and April 14, Free

This professional learning session is designed for any licensed Ohio educator who is seeking to integrate foundational Computer Science (CS) into their curriculum. The content is most suitable for upper elementary and middle school students.

Participants will engage in hands-on activities, exploring screenless and block coding, as well as practical strategies for using Ozobots to effectively meet the unique learning needs of gifted students or any student who is ready to develop and engage high level creative thinking skills. The session includes dedicated time for educators to develop actionable plans for immediately bringing new ideas to their specific classroom contexts.

[Read more and register](#)

InventEd Resources

A recent [Aspen Institute blog](#) highlights new research showing that while technical skills are important, employers consistently prioritize *durable skills*—like trustworthiness, attention to detail, collaboration, and responsibility—that are valuable

across jobs and can't be automated away. The piece urges educators, employers, and training programs to integrate these enduring skills with technical learning to prepare early-career workers for success in a rapidly changing economy.

The world needs more inventors, not just consumers of technology.



Today's students can swipe and tap with ease—but the world needs young people who can create solutions, not just use them. Invention education builds this capacity by helping students identify real problems, prototype ideas, and iterate with purpose. It's how learners develop the confidence and mindset to become problem-solvers, innovators, and creators. We believe every student deserves that chance. What if the next breakthrough comes from a student in your community?

In the spirit of the upcoming Kid Inventors' Day on January 17, [explore our resources](#) and bring invention education into your classroom or learning space in the new year.

InventEd's resource page [is available here](#) with toolkits, overviews, newsletters, curricula, and more.

Fluid Power News



Remind Your Students: Apply For The Fluid Power Scholarship

The NFPA Education and Technology Foundation is now accepting applications for our \$2,500 Fluid Power Scholarship available to students pursuing fluid power education. This scholarship is partially funded by generous donations to the [Tom Wanke Legacy Fund](#). Multiple scholarships are available for the 2026-27 academic year. The deadline for applying is March 15, 2026, at 11:59 PM CDT.

A minimum 2.5 GPA on a 4.0 scale, 500-word essay, and one letter of recommendation are required from each applicant. The Foundation's goal is to help graduating high school seniors, and individuals enrolled at technical colleges, community colleges, and universities pursue their interests in fluid power.

Please share [this information](#) with your peers and encourage students to apply. Contact Haley Nemeth at hnemeth@nfpa.com with any questions.



Spring Semester Success Starts Here: Explore NFPA Resources

As the spring semester gets underway, NFPA wants to ensure that educators and students have everything they need to make the most of our fluid power programs. Below is a roundup of key resources designed to support educators and students in the months ahead.

- **Fluid Power Vehicle Challenge**

Make the most of the resources available to keep your project on schedule and ensure you're ready to compete in April. You can find these resources on the FPVC website. Don't hesitate to reach out early and often to NFPA, your industry mentor, or your assigned technical liaison for support.

- **Speakers Bureau**

If you'd like help arranging a guest speaker from the fluid power industry for your classroom or Fluid Power Club this spring semester, contact us at workforce@nfpa.com.

- **Students: Submit Your Resume**

Hiring season is in full swing! Upload your resume to our website, and we'll share it with NFPA member companies that are looking for talent.

- **Fluid Power Club Renewals**

If you haven't renewed your Fluid Power Club yet this year, there's still time. Apply today and let NFPA help your student organization explore fluid power and the broader industry.

- Check out our [Fluid Power Action Challenge webpages](#) to discover how you can participate in a community-wide Action Challenge or host one right at your school.

If you need additional assistance, guidance, or information about any of these programs, our team is ready to help. Let's make this spring semester a productive and successful one together.

Looking For Classroom Materials?

Visit The NFPA website for materials for [Middle School](#), [High School](#), [Technical College](#), and [Universities](#).

50 States 50 Fixes

[The New York Times](#)

Now more than ever, environmental solutions may seem out of reach. But they're happening all over the country. This year, we highlighted one thing that's working in every state.

[Read More](#)

Ohio Fun Fact - All Ohio Space Shuttle Mission

[Watch on YouTube](#)



Santa's Workshop Comes to Life in Central Ohio as Woodworkers Build Toys

[The Columbus Dispatch](#)

Santa Claus had a few extra elves to help with his toymaking, but it's a bit south of the North Pole – in central Ohio.

Creating everything from puzzles to a ring toss game, ducks that waddle and doll beds, the [Woodworkers of Central Ohio](#) (WOCO) worked individually and in groups throughout the year to build holiday toys for local children in Franklin County and surrounding counties.

[Read more](#)

10 Ideas Changing the World in 2026

TED Playlist

Breaking boundaries, challenging assumptions, sparking change — here are 10 defining talks from three TED initiatives: The Audacious Project, TED Countdown and the 2025 TED Fellows. From life-saving medical discoveries to community-led safety solutions, these bold ideas turn crisis into fuel and inspire action around the world.

[Watch videos](#)

Free STEM Lessons & Worksheets

[STEM Education Works](#)

Access free STEM lessons, worksheets, and tutorials on 3D printing, design, robotics, and other STEM technologies! Explore engaging activities for all grade levels, including standard-aligned lesson plans and free activities from our partners.

[Read more](#)

Amos Winter: How Do You Build an All-Terrain Wheelchair for the Developing World?

In many countries, uneven and unpaved roads make it hard to get around in a standard wheelchair. MIT engineer Amos Winter describes his design for an affordable, lever-powered, all-terrain wheelchair.

[Listen or watch the TED Radio Hour episode](#)

Innovators at CU Are Building a ‘Sexy’ Walker To Get Older People Back on Their Feet

Many older people would rather risk falling than use walkers, those metal contraptions that lend stability to people who struggle with balance. Walkers are deemed so ugly, and come with so

much stigma that up to half of the people who need one say, “No thanks, I’ll take my chances.”



Courtesy: Center for Innovative Design in Engineering

A conceptual drawing of a walker that will be adjustable for narrow spaces, and fold to fit into the trunk of a car or an airplane's overhead bin. Other features, like a seat, are planned.

But what if you could build a walker that's elegant, cool, and maybe even sexy?

That's what a group of innovators at the University of Colorado has set out to do.

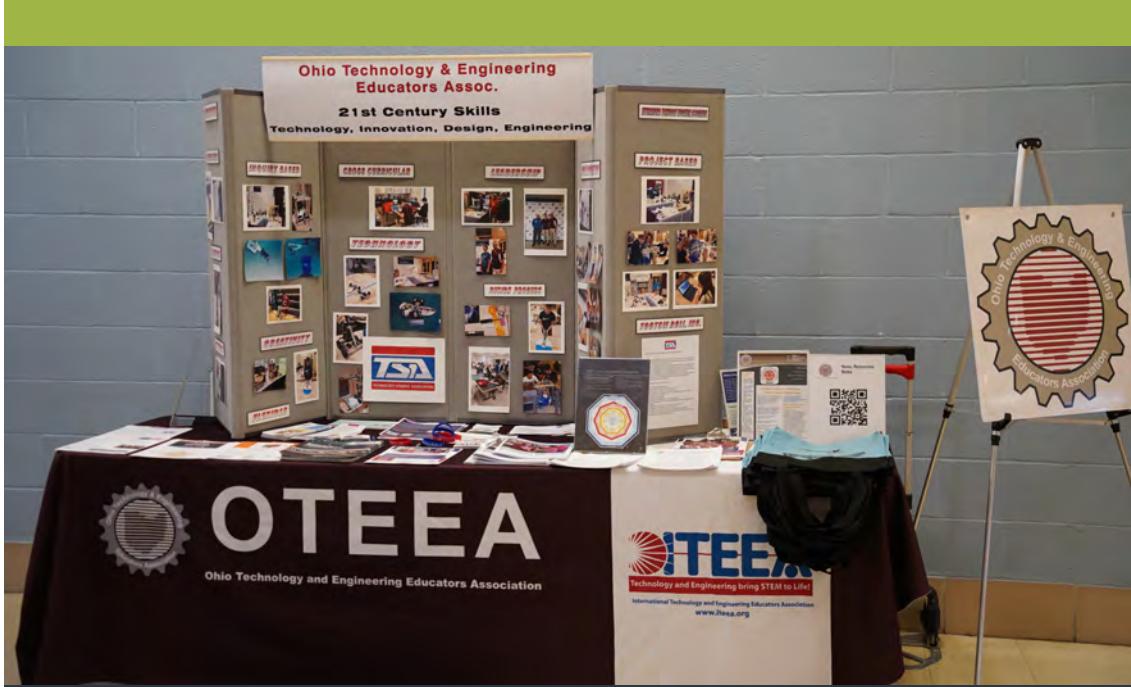
“We did a national survey of over 3,300 respondents. And what we learned is, it's all about stigma,” she explained. “It makes me look old. It makes me feel old. I'm afraid I'll get mugged on the street. It's really unattractive and I don't like how it makes me feel inside.”



Hart Van Denburg/CPR News

A traditional walker for older folks, at left, which aims to help with mobility but comes with some stigma, alongside a prototype “sexy walker” being developed at the Center for Innovative Design and Engineering, at CU Anschutz.

[Read more](#)



This Week's Technology Tips

Why Use a Hand Plane?

[Woodworkers Guild of America](#)

If all of your woodworking has been done with nothing but power tools, and done successfully, you may wonder why you should bother learning to master the use of woodworking hand tools. In this video, Tom Caspar provides a dose of reality on why hand planes are beneficial to use and even performs some tasks better than power tools. He provides some compelling reasons to try hand planing on portions of your next woodworking project.

[Watch video](#)



DIY Blacksmithing Forge

[Make: Magazine](#)

Last year I decided I needed a forge so that I could advance my blacksmithing skills as another technique for my sculpting. There are many commercial models available but, being retired, I have more time than money so I decided to try my hand at making one.

To start, I studied YouTube videos of DIY forges. There are many and I watched them all. None were exactly what I wanted so I set out to design a hybrid. I researched the necessary materials. I read all about soft firebricks, which can withstand temperatures above 1,800°F — good for heating up mild steel. I'd need a high-temperature mortar, called "Satanite," of all things. Long hose clamps to hold things together and some steel angle iron for the frame. And lastly, the burner, which is challenging to make.

[Read more and build](#)

“The future belongs to the few of us still willing to get our hands dirty.” — Chris Sacca

*Grow Your Professional Learning Network
with an ITEEA 2025-2026
Group Membership!*



MEMBERSHIP MAKES A DIFFERENCE!

**Purchase an ITEEA Group membership now to gain access to
valuable member benefits at an annual rate of \$260!**

**ITEEA OFFERS GROUP MEMBERSHIPS FOR ELEMENTARY, MIDDLE, AND HIGH
SCHOOLS THROUGH WHICH YOUR TEAM OF PROFESSIONALS CAN BENEFIT FROM:**

- Complimentary electronic subscription to [Technology and Engineering Education \(TEE\)](#), ITEEA's flagship publication (\$70 value).
- Discounted registration to [ITEEA Conferences](#).
- Eligibility for [ITEEA awards, scholarships, and other recognition](#).
- Discounted ITEEA publications and products.
- Discounted [Professional Learning byDesign \(PLbD\)](#) trainings and workshops.
- Discounted professional liability insurance, with rates as low as \$108/year for \$1 million in liability protection, \$60,000 of life insurance at no cost for one full year for new members, and further savings on additional [insurance programs](#) through the [Trust for Insuring Educators \(TIE\)](#).
- Free registration for year-round members-only engagement opportunities such as [Educator Xchanges](#).
- Free school position advertising on the [Career Connections](#) page of the ITEEA website for up to three months (\$350 value), plus promotion on ITEEA's News Feed and/or Social Media.

LEARN MORE AND JOIN TODAY!
WWW.ITEEA.ORG/GROUP-MEMBERSHIP



All group memberships commence July 1 and conclude on June 30 of the following year.

The International Technology and Engineering Educators Association
www.iteea.org