

## ADULT ADVOCATES NEWSLETTER - APRIL 2024

### April's STEM Adventure: From Cosmic Quests to Earthly Codes

Welcome to our April edition, where we spring into a universe of STEM celebrations and learning adventures! This month, we're journeying from the vastness of space on the International Day of Human Space Flight to the intricate signals of Morse Code Day, and from the seismic discoveries of Richter Scale Day to the innovative frontiers of National Robotics Week and National Telephone Day. Each event offers a unique opportunity to commemorate groundbreaking achievements and to ignite the curiosity of future STEM pioneers. Join us as we decode the mysteries of the earth, navigate the digital realm, and launch dreams into the cosmos!

### International Day of Human Space Flight: Celebrating Cosmic Voyages

On **April 12th**, we observe the **International Day of Human Space Flight**, a tribute to humanity's inaugural voyage into the cosmos. This day not only commemorates the monumental accomplishments of astronauts but also honors the engineers and scientists who have been instrumental in advancing space exploration technologies. Through engaging activities like model rocket launches, virtual reality space explorations, and interactive discussions with pioneering women in the aerospace field, we fuel curiosity and inspire the next generation. Such initiatives highlight the significance of diversity in STEM and celebrate the incredible potential of women to chart new territories in space.

Further exploring the galaxy of possibilities, the International Day of Human Space Flight is more than a nod to historic feats; it serves as a guiding star for aspiring explorers and innovators. This day illuminates the contributions of women who have been critical to space exploration's success like **Mae Jemison**, the [first African American woman to travel in space](#). Integrating these narratives into educational and community forums empowers young women to envision themselves in aerospace roles, daring to dream big and aim for the stars. This observance is a reminder of the boundless opportunities awaiting women in STEM and the impact they can make on our collective exploration of the unknown.



**"We look at science as something very elite, which only a few people can learn... That's just not true. You just have to start early and give kids a foundation."**

*- Dr. Mae Jemison*

## Richter Scale Day: Understanding Earth's Trembles

**Richter Scale Day**, observed on **April 26<sup>th</sup>**, honors the birth of Charles F. Richter, the inventor of the Richter Scale. Introducing students to seismology and earth sciences on Richter Scale Day can be both educational and exciting. Here are some fun facts to spark their interest:

- ***The Earth is Always Trembling:*** Even when you don't feel it, the Earth is constantly moving. Seismologists record hundreds of small earthquakes worldwide every day. These minor tremors can provide valuable data for understanding Earth's structure and dynamics.
- ***Animals Might Feel Quakes Before Humans Do:*** Scientists believe this might be due to their ability to feel the primary waves (*P-waves*), which are faster and less damaging, before the secondary waves (*S-waves*) that we can feel.
- ***Earthquakes Can Shorten the Day:*** An earthquake in Japan was so powerful that it shifted Earth's mass, slightly accelerating its rotation, and shortened the length of a day by a few microseconds.

DiscoverE offers a fun and educational activity to ["Make Your Own Seismograph,"](#) enabling students to grasp the basics of measuring seismic activities. Engaging in this hands-on project fosters an appreciation for the engineering challenges involved in monitoring and mitigating the impacts of earthquakes.

## Girls in Telecommunications Technologies Day: Bridging the Gender Gap

This April, we also recognize Girls in Telecommunications Technologies Day, underscoring the importance of encouraging young women to explore careers in telecommunications. By highlighting female pioneers in the field and offering workshops on modern communication technologies, we can inspire girls to become the next generation of innovators, break gender stereotypes, and contribute to more.

### Elizabeth "Jake" Feinle

As the director of the Network Information Systems Center at Stanford Research Institute, [Feinler and her team developed the first domain naming system \(DNS\) for the internet](#), creating the .com, .edu, .gov, .mil, .org, and .net system used today. Her contributions were pivotal during the early days of the internet.



## National Telephone Day: Ringing Through History

Celebrated on April 25<sup>th</sup>, National Telephone Day pays homage to the invention of the telephone, a device that has been connecting people across the world for over a century. This day serves as a reminder of the telephone's journey from **Alexander Graham Bell's** initial invention to today's smartphones, which combine telephony with computing power.

## National Robotics Week: Innovating for the Future

The second week of April, celebrated as **National Robotics Week** or **RoboWeek**, highlights the transformative power of robotics across technology, manufacturing, healthcare, and beyond. This period serves as a vibrant showcase for robotics competitions, workshops, and exhibitions, designed to spark enthusiasm for robotics and engineering among students. Participating in robotics initiatives educates young minds on crucial STEM skills while fostering teamwork, creativity, and problem-solving abilities.

In the spirit of RoboWeek, it's essential to spotlight [FIRST® \(For Inspiration and Recognition of Science and Technology\)](#), a global nonprofit organization founded in 1989 by inventor Dean Kamen.



FIRST prepares young people for the future through a suite of inclusive, team-based robotics programs suitable for ages 4-18 (*PreK-12*), which can be integrated into school curricula or structured after-school activities. FIRST goes beyond just robotics. Participants are immersed in sports-like challenges that build self-confidence, collaborative problem-solving skills, and have a lasting impact on STEM learning/interest.

### NFPA Robotics Scholarship

A significant \$30,000 scholarship awaits a high school senior who demonstrates excellence in using pneumatics in competitive robotics. This scholarship not only offers substantial financial support but also fosters connections between robotics teams and industry experts, providing mentorship and guidance in the effective use of pneumatics. To learn more, visit the [NFPA Foundation website](#).

## National Pneumatics: Powering Industries with Air

On **April 27th**, we observe **National Pneumatics Day**, established by S.M.C. Corporation of America to highlight the significance of pneumatics in industrial automation and processing equipment. Pneumatics, the use of compressed air to store or transport energy, plays a vital role in manufacturing and automation by providing a clean, efficient, and safe power source. Take this opportunity to delve into the principles of pneumatics, how compressed air systems work, and their applications in various industries.

## Cracking the Code of STEM Pioneers: A Crossword Challenge

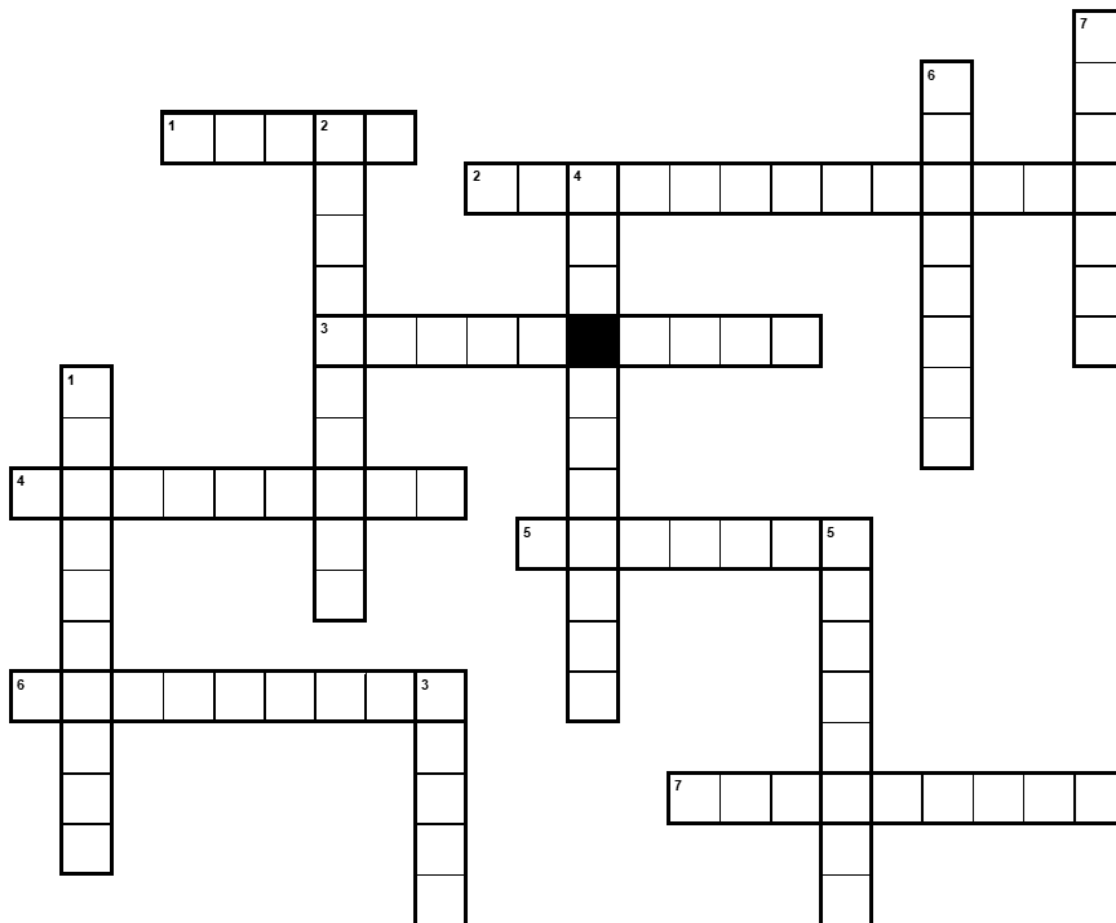
Put your STEM smarts to the test and embark on a puzzle-solving adventure! This crossword is designed not just to test your knowledge but to celebrate the trailblazers who have shaped the worlds of science, technology, engineering, and mathematics. Whether you're completing this puzzle solo or turning it into a fun, educational activity for your classroom or group, it's a fantastic way to engage with the stories and innovations that have propelled humanity forward.

### How to Play

- Read through the clues provided in the "Across" and "Down" sections.
- Fill in the corresponding spaces on the crossword puzzle with the names, terms, or concepts that you think best answers the clues. *(Don't be afraid to guess and check; sometimes, the best learning comes from revising our initial thoughts!)*
- For an added layer of interaction, research any names or concepts you're unfamiliar with to uncover their stories and contributions to STEM.

- Once completed, share your achievements with your peers, students, or on social media to spread inspiration and challenge others.

Get ready to puzzle out the past, present, and future of STEM, one square at a time. "Cracking the Code" is more than just a crossword; it's a journey through the legacy and potential of science and technology. Let the solving begin! [Click Here for a Printable Version](#)



### Across

- Global nonprofit, started by Dean Kamen, inspiring young people through robotics
- The act or process of using words, sounds, signs, or behaviors to express or exchange information
- A system of sending messages by holding the key down to create a series of electrical signals (dots and dashes)
- Alexander Graham Bell's invention that revolutionized communication
- Scale used to measure the magnitude of earthquakes, named after an American seismologist
- A fixed, oversimplified image or idea of a particular type of person or thing, often challenged in STEM fields
- Wireless technology standard for exchanging data over short distances

### Down

- Technology using compressed air for automation in manufacturing
- The scientific study of earthquakes and the propagation of elastic waves through the Earth
- Type of seismic wave that is the fastest and arrives first during an earthquake
- First African American woman to travel in space, aboard the Space Shuttle Endeavour in 1992
- Annual event celebrating the impact of robotics on the future of technology, manufacturing, healthcare, and more
- Global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to communicate
- A program by the Society of Women Engineers aimed at inspiring the next generation of female engineers

## **WE Locals**

The WEWE Local North American Conferences happen world-wide annually to connect participants in all stages of their careers and from various technical and non-technical backgrounds. WE Locals feature keynote speakers, professional breakout sessions, and networking events. This year, the 2024 WE Local will take place in five locations, including Las Vegas, Baltimore, Wichita, Bengaluru, and Munich, from late February to late April. Register now on the [WE Local website](#)!

## **Follow SWE Outreach on Social Media**

Get in on the conversation and join our [Outreach Incubator Facebook page](#) to engage in discussions and receive tips for conducting outreach. Educators can join our [SWENextEd Facebook page](#) to find even more classroom resources.

### **SWENext HQ is also on social media!**

Engage with fellow SWENexters, gain access to fun activities and see what SWENext is up to!

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