TURNING WASTE INTO EDUCATIONAL WONDER

In an era where environmental consciousness takes centre stage, the Turning Waste into Educational Wonder competition organised by STEM Alliance, Scientix and Lenovo emerges as a key player in driving positive change within the educational landscape.

Thanks to Lenovo's commitment to education and sustainability, the competition not only has promoted STEM education, but has also empowered educators to shape a generation that prioritizes and advocates for eco-friendly practices.

This collaborative effort stands as a compelling example of the substantial societal impact achieved when educational institutions align with corporate partners like Lenovo.

PREMIUM PARTNERS

CISCO | GSMA | HUAWEI
intel. | Lenovo | Microsoft
Qualcomm | TRANE TECHNOLOGIES

GENERAL PARTNERS

AIRBUS FOUNDATION
OneStream
Vernier SCIENCE EDUCATION

More information: stemalliance@eun.org

THE COMPETITION

The Competition invited educators in primary and secondary schools in the EMEA region to explore Lenovo's Activity Booklet, draw inspiration from the proposed activities, and develop a new and creative project fostering students' creative and innovative thinking.

STEM Alliance – Lenovo Competition: Turning Waste into Educational Wonder

ENGAGEMENT

160+ submissions

4,000+ students

23 countries

9 winners

OUTREACH

1,900+ social media interactions

11,000+ newsletter readers

68,000+ webpage visits

AWARDS

15 Winbook   **18** Arduino Kits

Lenovo LanSchool and Intel SFI licenses

Invitation to BETT in London

OUTCOMES

The outcomes of the competition paint a clear picture of its success and widespread influence. With participation from more than 160 teachers spanning 23 countries, the competition engaged a diverse and extensive audience. The quality and creativity showcased in the submitted projects reflected a strong commitment to waste management and improving STEM education. Recognizing 9 outstanding winning projects, the competition not only celebrated success but also sparked a broader movement, inspiring educators and students to champion sustainable practices.

FEEDBACK

"The project contributed to develop students' creativity as well as their environmental awareness. The most interesting part was related to the creative use of Lenovo cardboard boxes."

"I would like to thank you for defining the scope of the competition with the incentive of keeping the cost to a minimum. In this way, you enable disadvantaged schools like ours to be involved in the process."

"The competition was exciting for our students. I want this type of work to become widespread."

95% thinks the competition topic was interesting

91% would recommend the competition to others

PROJECTS

Selcuk Yusuf Arslan, Turkey, Recycling smart

The project uses a machine learning technology to sort metal, plastic, and paper waste based on webcam object recognition.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-2.pptx

Honorata dos Santos Costa Pereira, Portugal, Waste4Waves

Students selected disposable items like cups and spoons, wool scraps, gold paper, cardboard boxes, and RFID tags to create handbells. Using an Arduino code and RFID reader, they linked tag frequencies to musical sounds in an electrical circuit.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-3.pptx

Manuel Jesús Carrasco Ruiz, Spain, Smart pedestrian crossing

The utilizes basic programming and renewable energy to tackle environmental concerns. It features a sensor-based pedestrian crossing with an LED strip powered by solar panels upon detecting a pedestrian, promoting sustainable energy use.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-1.pptx

António João Lopes, Portugal, Smart (AI) House

Students grasped electrical circuit basics and implemented them in a Smart House illumination system with a Light Sensor. They added AI Face Recognition for light control, programming Arduino with PictoBlox.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-15.pptx
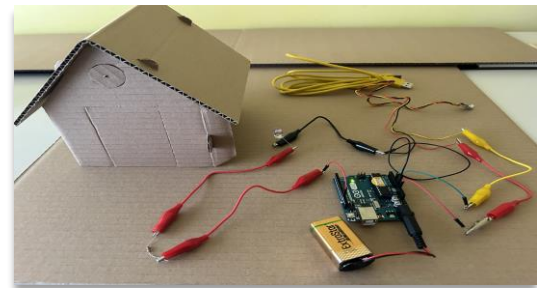
Stavroula Skiada, Greece, The music we can see!

The project involved crafting a 3D piano model with cardboard, recycled materials, and BBC micro:bit controllers. The project aimed to create a tactile piano for visually impaired individuals, incorporating recyclable batteries and diverse art supplies.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-12.pptx

Silvana Jakimovska Binova, North Macedonia, Emoji Bot

The project combines micro:bit, HaloHD, cardboard, and paper to create a classroom emotional companion in the form of a robot.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-16.pptx

Maria Giovanna Battaglia, Italy, CrazyMathDice

The initiative aimed to boost basic math comprehension using a recycled-material mathematical dice and basic programming. Microbit facilitated number extraction during the game.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-22.pptx

Andres Garcia Vega, Spain, The Earth's satellites

The pupils in groups, constructed different types of satellites reusing cardboard boxes, solar panels, and LEDs. The aim was to get them to know the solar system, and specifically the lunar phases, the earth and satellites.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-22.pptx

Hayriye Olğun, Turkey, From Waste to QRmicroscope

Using waste cardboard, silicone, and bottle caps, students crafted QRmicroscopes with converted QR codes, allowing affordable smartphone-based observation of microscope images.
http://files.eun.org/scientix/STEM-Alliance-Lenovo-Entry-23.pptx