

# Low-Cost Experiments in STEM Education



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## STEM advent calendar

Our STEM advent calendar features an array of gifts comprising 17 experiment kits tailored for one semester. These kits, intended for children aged 9-14, aim to ignite curiosity in research and address critical questions tied to the 17 Sustainable Development Goals outlined by the United Nations.

The goal is to create open-source STEM experiments geared towards motivating Ukrainian children to delve into science through gamification, cultivating their curiosity in research, and advocating for the attainment of the UN Sustainable Development Goals.

- is low-cost scientific set
- is an interesting way to talk to students about sustainable development
- is a funny!

\$25



Turku, Finland

**13 CLIMATE ACTION**  
Creating a structure resilient to natural disasters

**4 QUALITY EDUCATION**  
Children will acquire the skill of sign language communication

**3 GOOD HEALTH AND WELL-BEING**  
Examination of bacteria cultivated from hands and surfaces, and assessment of bacterial resistance to antibiotics.

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**  
The challenge of constructing a bridge to enhance engineering abilities.

**15 LIFE ON LAND**  
An experiment to study soil acidity and ecosystem stability.

**1 NO POVERTY**  
It's a financial simulation game focused on community finances.

**16 PEACE, JUSTICE AND STRONG INSTITUTIONS**  
A sensitive lesson about countering all forms of violence

**17 PARTNERSHIPS FOR THE GOALS**  
Establishing a socially conscious enterprise within the school environment.

**11 SUSTAINABLE CITIES AND COMMUNITIES**  
Creating a park model using puzzles.

**7 AFFORDABLE AND CLEAN ENERGY**  
Do-it-yourself renewable energy sources for children.

**5 GENDER EQUALITY**  
It is an situational game to explore the glass ceiling phenomenon in women's careers.

**14 LIFE BELOW WATER**  
Experiment on impact of ocean acidification on marine life.

**10 REDUCED INEQUALITIES**  
Developing solutions for transportation.

**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**  
Creating biomaterials from natural resources that will replace plastic packaging.

**2 ZERO HUNGER**  
Cultivation of microgreens in an environment with limited nutrients.

**8 DECENT WORK AND ECONOMIC GROWTH**  
Creation of ecological postcards from recycled paper.

**6 CLEAN WATER AND SANITATION**  
Creating your own water purification filter.

Conclusions: \$25 allows students to understand the Sustainable Development Goals through simple and interesting experiments and games.