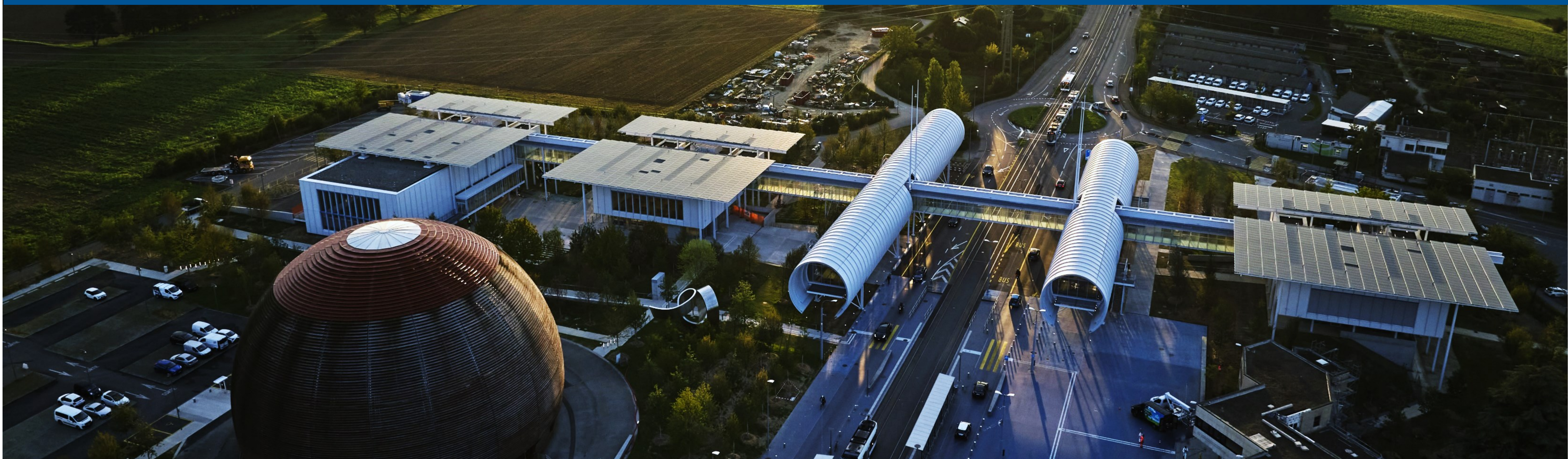




CERN Science Gateway – New Education Labs

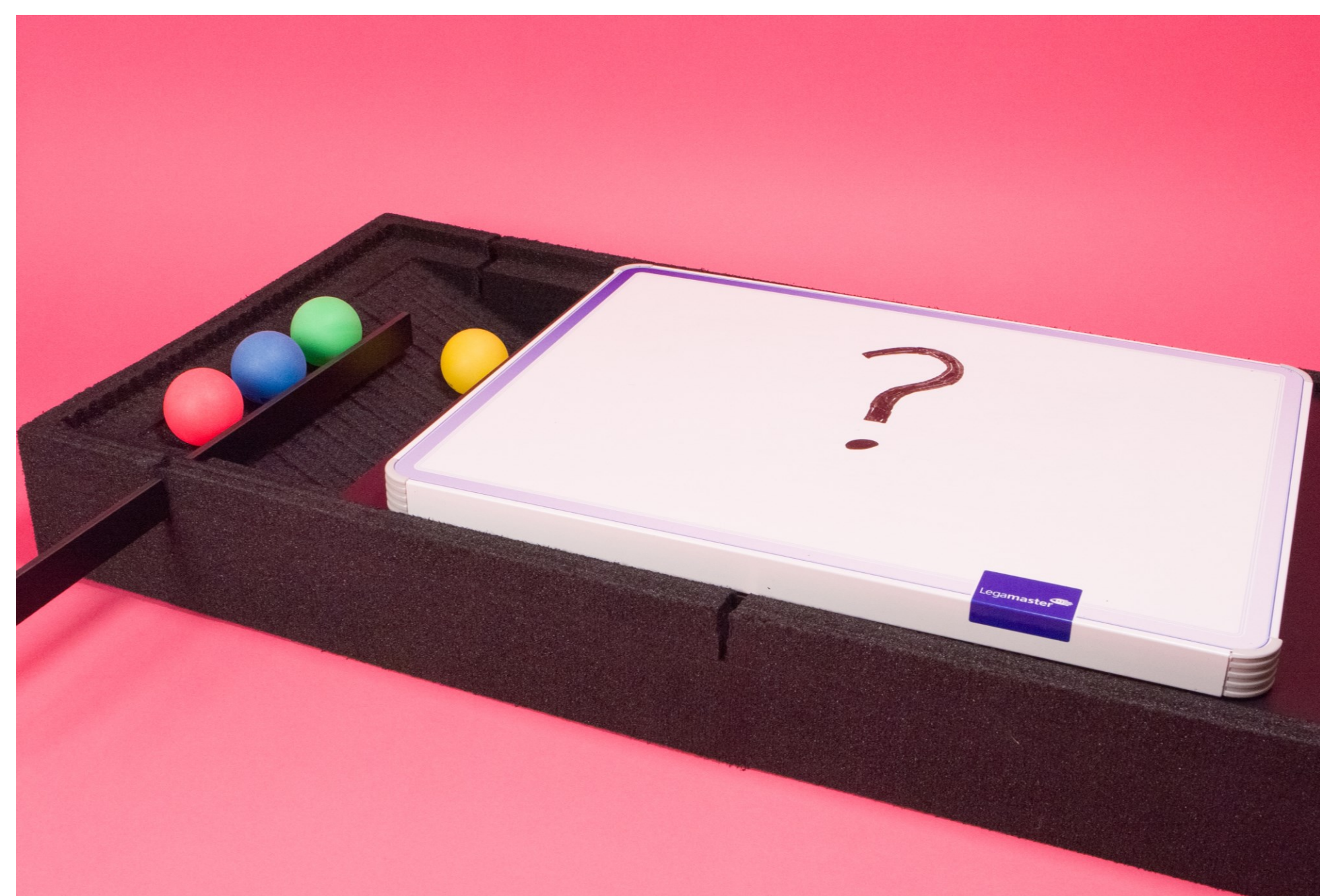
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Abstract

CERN is the world's largest particle physics laboratory. It's the home of the most powerful particle accelerator in the world, which enables scientists to study the fundamental interactions between elementary particles. CERN also offers a unique environment for learning and training. CERN Science Gateway, a brand-new science education and outreach centre that opened on 7 October 2023, offers visitors a rich and authentic out-of-school learning experience. This poster presents new lab workshops developed for CERN Science Gateway, which bring authentic STEM challenges to learners as young as 5 years.

- **Iconic Building** designed by Renzo Piano Building Workshop, supported by Brodbeck-Roulet architectes associés, that reflects the industrial feel of CERN.
- Includes interactive exhibitions, education labs, science shows, and serves as the starting point for guided tours of CERN's research facilities.



Resources from CERN for You

- New collection of educational resources produced by different education and outreach teams at CERN.
- Includes scripts, design files and educational support material for workshops and shows that are easy to replicate.

→ visit.cern/resources

Examples

Scattering boxes - Seeing the invisible
Explore how balls interact with a hidden structure to develop a scientific model.
Author: CERN PER team
Age group: 5-12 | 13-15 | 16+

Balloon Hovercraft - Power of Air
Explore how air is able to help us lift heavy things by reducing friction.
Author: CERN PER team
Age group: 5-12 | 13-15

Playdough Core Sampling
Explore how geologists delve into the mysteries beneath the Earth's surface.
Author: CERN PER team
Age group: 5-12

Particle Detectives: A low-cost portable science show
Join us as 'particle detectives' to explore particles and their interactions, from molecules to CERN.
Author: CERN PER team
Age group: 13-15 | 16+

A cardboard spectroscope and antimatter research?! - Solvay DIY video
Learn about the link between a cardboard spectroscope and antimatter research, in this short video by the CERN Solvay Education Programme.
Author: CERN Solvay Education Programme
Age group: 13-15 | 16+

A leaky bottle & the ATLAS particle detector?! - Solvay DIY video
Learn about the link between a leaky bottle and the ATLAS particle detector, in this short video by the CERN Solvay Education Programme.
Author: CERN Solvay Education Programme
Age group: 13-15 | 16+

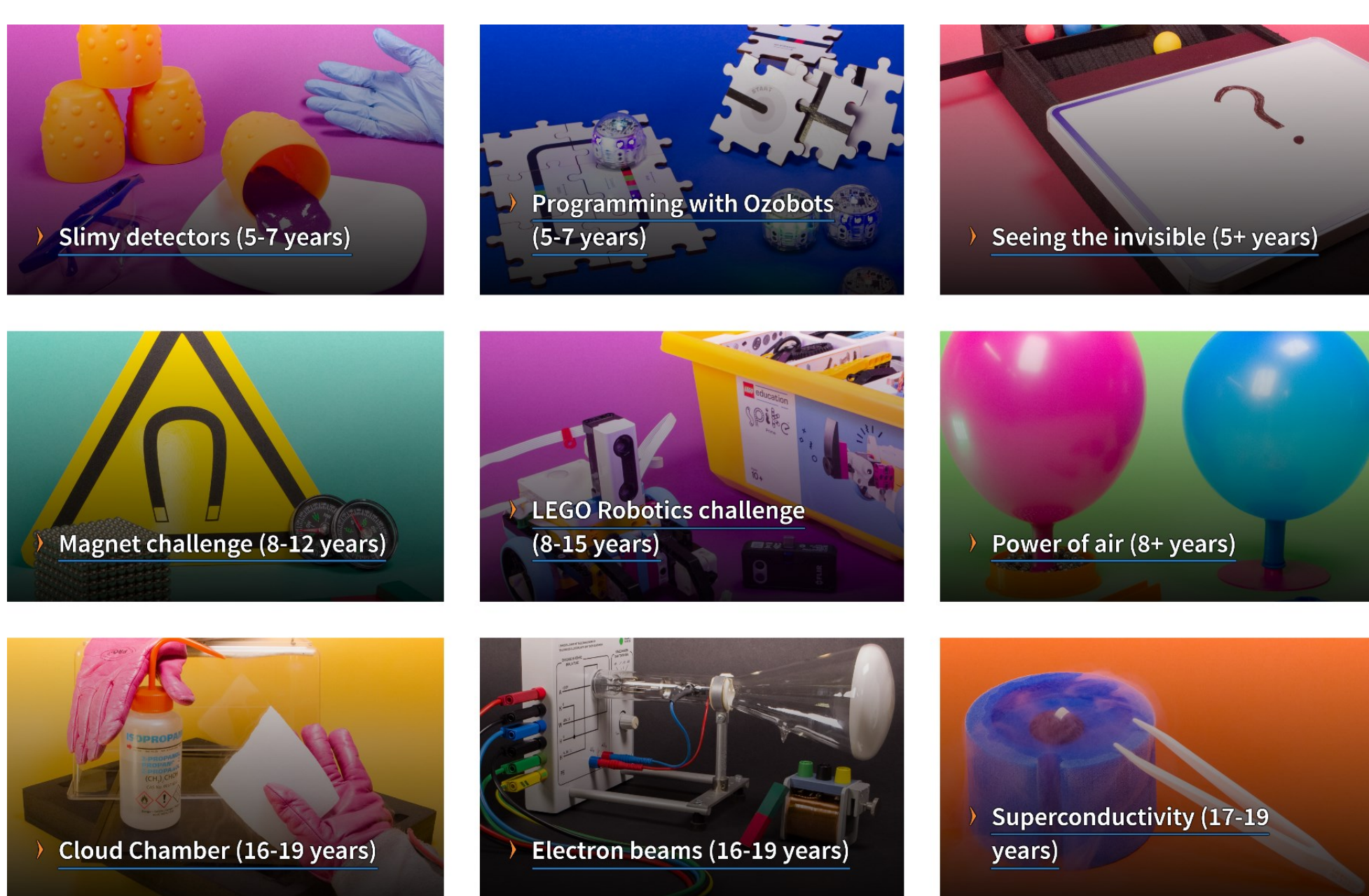
A rainbow in a box & the ATLAS detector?! - Solvay DIY video
Learn about the link between a rainbow in a box and the ATLAS detector, in this short video by Solvay and CERN.
Author: CERN Solvay Education Programme
Age group: 13-15 | 16+

An iron screw & CERN electromagnets?! - Solvay DIY video
Learn about the link between an iron screw and CERN electromagnets, in this short video by the CERN Solvay Education Programme.
Author: CERN Solvay Education Programme
Age group: 13-15 | 16+

New education labs at CERN: Discover your inner scientist!

The lab workshops at CERN Science Gateway offer about 25 000 participants per year the opportunity to explore their scientific curiosity through hands-on activities. These workshops cater to different educational levels and cover a broad range of topics.

All workshops begin with authentic STEM challenges linked to the science and technologies at CERN. The labs accommodate a diverse audience, with workshops available in up to 30 languages.

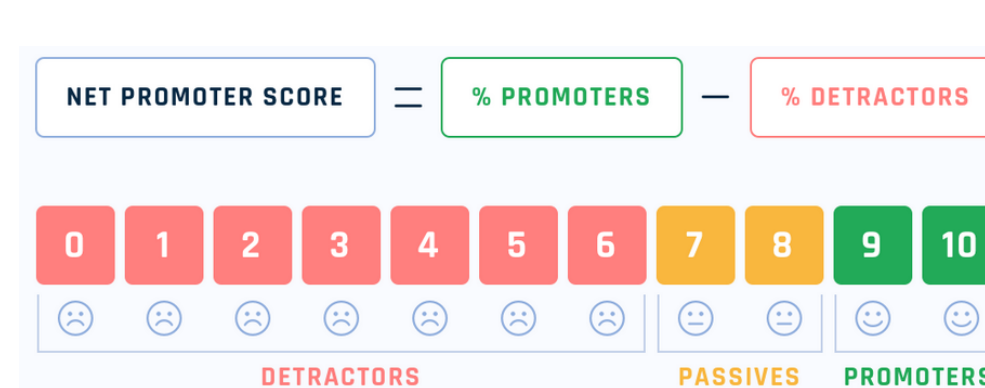


Feedback by participants taking part in family workshops

- Workshop: Seeing the Invisible
- Audience: Families and individual visitors
- Sample size: N = 81 (43 French, 38 English)
- Scale: 11-level scale: 0 - not at all to 10 - very much
- Converted to % scale, ± 1 standard deviation SD

Did you enjoy the workshop?	94% (±12%)
Are you curious to learn more about the [...] topic?	89% (±18%)
Was the duration of the workshop appropriate?	91% (±16%)
Did the workshop help you get a better understanding of what scientists do?	92% (±12%)
Was the guide engaging?	95% (±10%)
Was the guide friendly?	97% (±7%)
Was it easy to understand the explanations [...] ?	94% (±11%)
Would you recommend this lab workshop to friends and family?	96% (±9%)

Net Promoter Score: 87



Creators of the Net Promoter Score (Bain & Company) suggest:

- Above 0 is good,
- Above 20 is favourable,
- Above 50 is excellent, and
- Above 80 is world class.