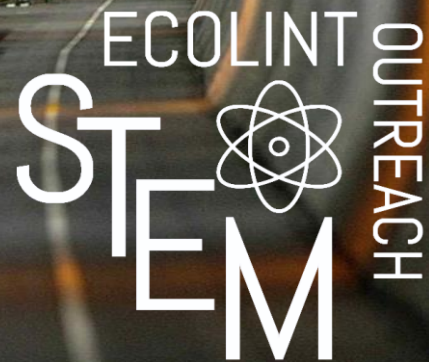


Outreach Program

ECOLINT
STEM
OUTREACH

The logo for ECOLINT STEM OUTREACH is located in the bottom right corner. It consists of the word "ECOLINT" in a sans-serif font at the top. Below it, the word "STEM" is written in a larger, bold, sans-serif font, with an atom symbol (a central circle with three elliptical orbits) positioned between the 'S' and 'M'. To the right of "STEM", the word "OUTREACH" is written vertically in a smaller, sans-serif font.



International Particle Physics
Outreach Group



International Particle Physics
Outreach Group



International Particle Physics
Outreach Group

Task 1

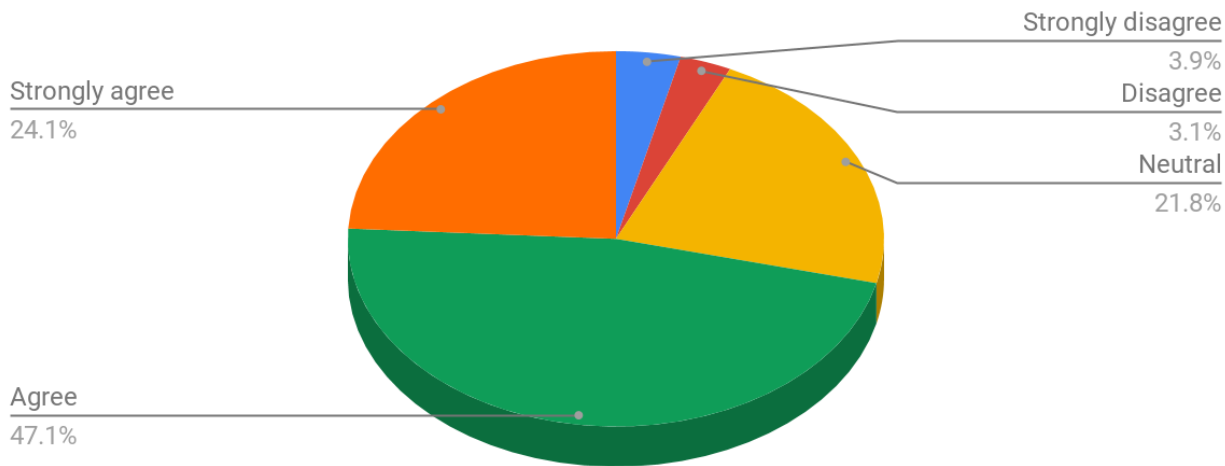
Find strategies to increase the number of young people taking-up
STEM subjects and encourage more young people to take-up
STEM careers or become a scientist like us.

Market Research

- Ecolint community survey

How far do you agree that STEM education should be mandatory throughout the whole curriculum?

257 responses



Market Research

- Primary STEM Education in Switzerland
- Primary STEM Education in rest of world
- Many students are curious/interested in STEM education in many schools
- Mainly the schools/teachers/lack of resources preventing them from receiving IPPOG education at young ages

Bibliography

https://www.expatica.com/ch/education/stem-education-for-primary-and-secondary-students-in-switzerland_1830659.html

<https://www.cbsnews.com/news/why-so-few-eager-students-will-earn-a-stem-degree/>

Innovation

- Local IPPOG run STEM competitions
- Raise awareness of the possibilities

STEM careers offer

- Career evening
- Speakers at schools



Tour Feedback

KEY FINDINGS



25 Sep - 1 Oct
2017

Nice! Your performance improved last week

- Ranked 5 out of 11 in area Westfield
- Your best hour was 9:00 AM
- Your overall best day was Oct 1, 2017
- The worst hour was 2:00 PM
- The overall worst day was Sep 29, 2017
- This score is in the top 30% of your industry

OVERALL DISTRIBUTION



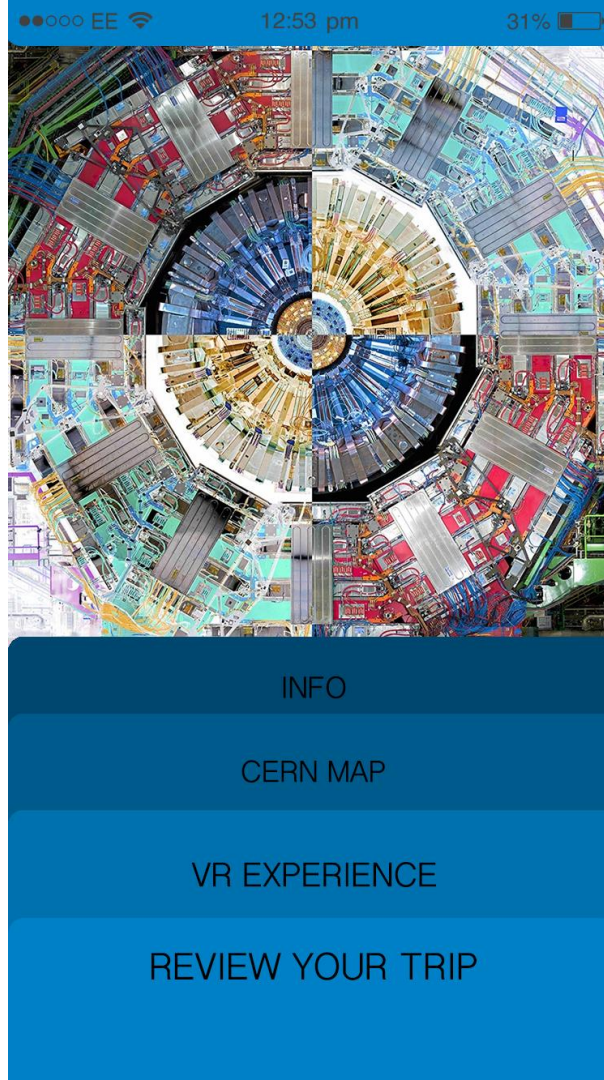
1,431 Responses

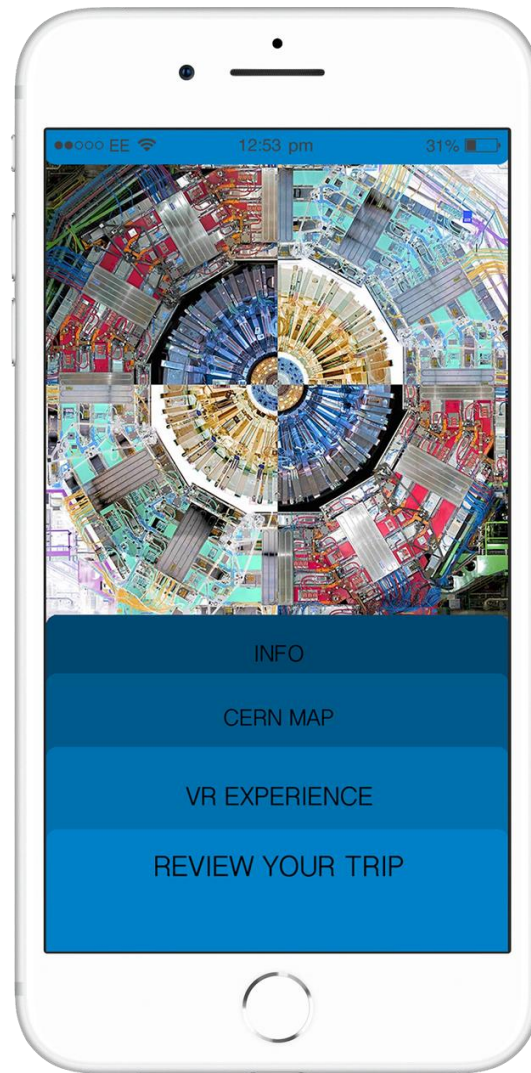


- Satisfaction device
- Lack of feedback
- Analytics are received through automated emails.



App







Marketing and Branding

- Flyers, banners and ads to advertise STEM competitions →

Instagram →

- Events coming up
- New technology
- Posting discoveries
- New inventions
- Posting ideas
- Which speakers are coming

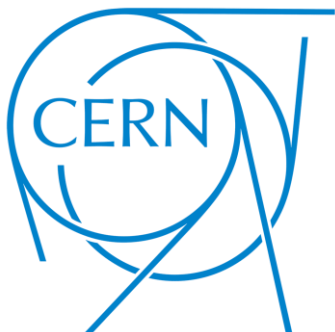


Twitter →

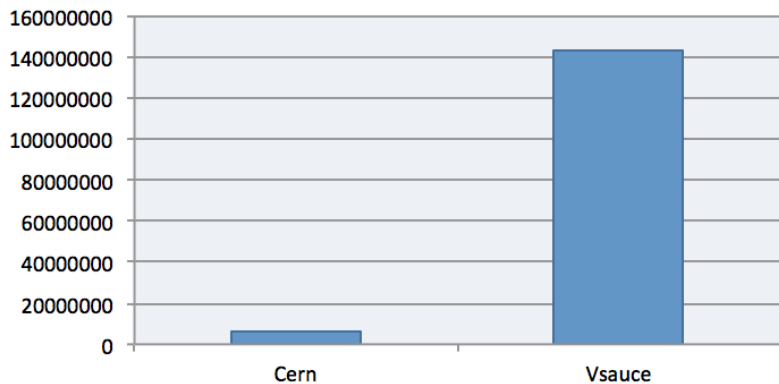
- Events
- Discoveries
- Updates
- New inventions
- Upcoming contests

Task 2

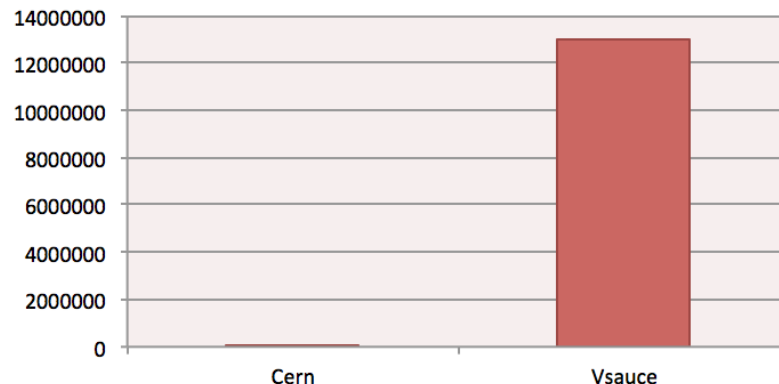
For the rest of the world, who won't become scientists, find ways which excites and educates young people about science and its importance and in particular, the role that particle physics has on the world



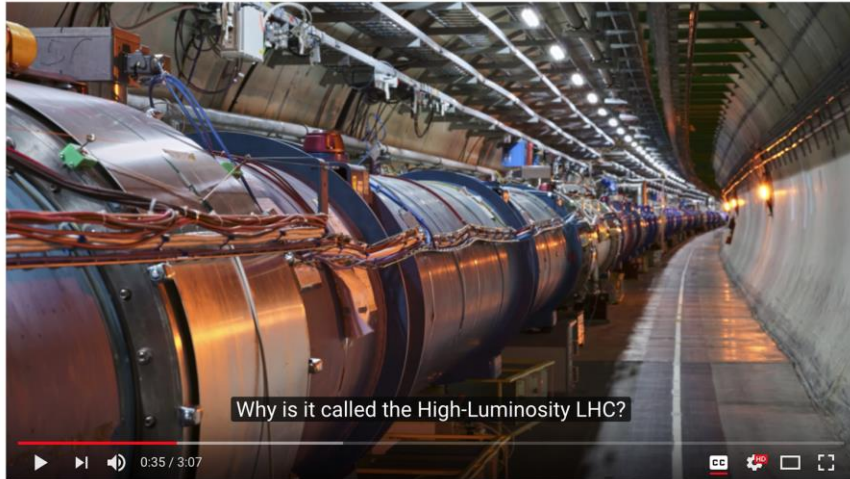
CERN vs Vsauce view count



CERN vs Vsauce subscriber count



Market Research



Why is it called the High-Luminosity LHC?

0:35 / 3:07



The road to High Luminosity: what's next for the LHC?

8,413 views

👍 130 💬 3 ➦ SHARE ➦ ...



CERN
Published on Jun 14, 2018

SUBSCRIBE 90K



to figure out who or what is doing what...

2:54 / 10:54



The Web Is Not The Net

4,569,649 views

👍 119K 💬 1.1K ➦ SHARE ➦ ...



Vsauce
Published on May 8, 2014

SUBSCRIBE 13M

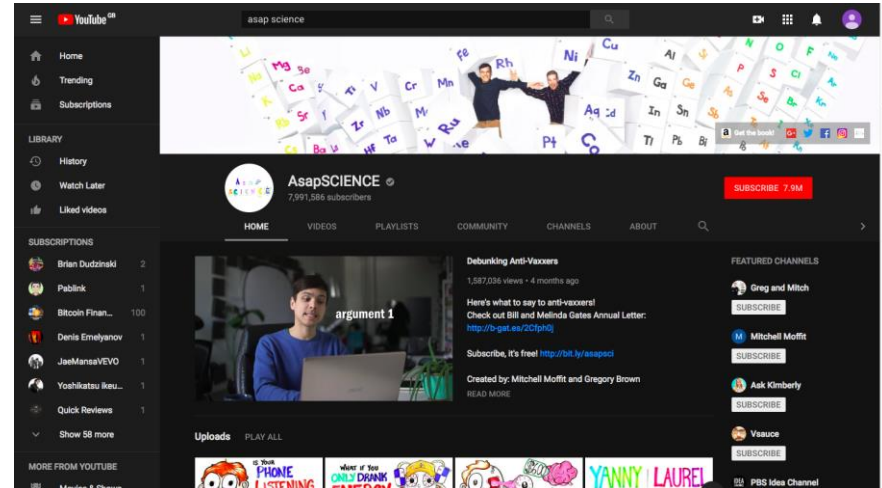
Marketing and Branding

Youtube - educational videos (range of difficulties):

- Beginner
 - Short, Basic Science,
 - Colourful, Animated,

- Intermediate
 - More challenging,
 - Engaging,

- hard /complex
 - Long, Complex,



Visitors per year



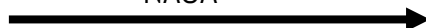
Technorama



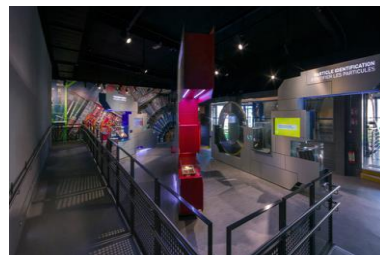
250k visitors



NASA



1.25m visitors



CERN



120k tour guide visits +
70k students from school
programs

Innovation

- Appeal to different age categories
- Tour guides change approach of tour according to age group
- For younger audiences not interested in science; an interactive museum
 - Captivating way to interest people in Particle physics - Virtual Reality
- Games for younger children
- Broadening the target audience by rebranding what we think is part of STEM
 - STEAM (Science, Technology, Engineering, Arts and Maths) - to attract more



Innovation

- An Art Contest for schools to get involved in particle physics in a visual way.
- Improve the Youtube channel and make fun experiments for kids, collaborating with famous Youtubers.
- Make the particle physics blog a CAS project.

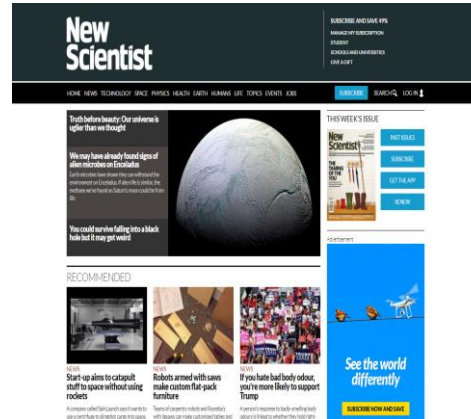


The Web Is Not The Net
4,569,649 views

119K 1.1K SHARE

Vauce
Published on May 8, 2014

SUBSCRIBE 13M



New Scientist

SUBSCRIBE AND SAVE 47%
MAKES AN EXCELLENT
PRESENT
SCHOOL AND UNIVERSITY
GIFT

HOME NEWS TECHNOLOGY SPACE PHYSICS HEALTH SCIENCE WEIRD TOPICS OPINION KIDS

THIS WEEK'S ISSUE
New Scientist
THE NEW ISSUE
POST BOXES
TRICKS
GET FULL ACCESS
9.95

RECOMMENDED

Truth before beauty: Our universe is uglier than we thought

We may have already found signs of alien microbes on Enceladus

You could survive falling into a black hole but it may get weird

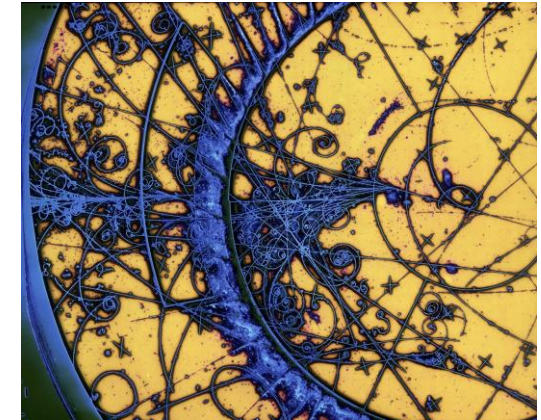
Start-up aims to catapult stuff to space without using rockets

Robots armed with saws make custom flat-pack furniture

If you hate bad body odour, you're more likely to support Trump

See the world differently

SUBSCRIBE NOW AND SAVE



Marketing and Branding

- Tours
 - Guides,
- Art contest
 - Posters
- Interactive Museum:
 - Educational games,
 - Flyers,
 - Content sections,





The colour green would be the easier content, aimed towards the younger visitors.



The colour yellow would be more in depth content, aimed towards the IGCSE students.



The colour red would be for harder, more complicated information aimed towards IB or A level students.



The colour blue would be the more complex information, for university students or scientists.

Task 3

Work with your physics teachers to improve the engagement and use of extracurricular activities and programmes in particle physics designed by CERN and IPPOG for your teachers and you. Explore how particle physics can become more widely used in the teaching of science in schools and IB curriculum?

Market Research

The Challenge

If you are a student or teacher in primary or secondary school with a passion for particle physics, then we have a challenge for you. Create an educational, fun, an inspiring tool showcasing how elementary particles are present in our everyday lives. This could be an **object, prototype, lesson plan, activity, game, experiment, or even a work of art**. Use your creativity! Just make sure to include an educational aspect - something that will get the message across that **science is a fundamental part of our lives**.

Eligible Participants

There are two categories: one for **primary level students (age 12 and under) and their teachers**, and one for **secondary level students (age 13 and up) and their teachers**. Individuals, groups, classrooms, and even groups of classrooms from anywhere in the world are welcome to participate. This includes aspiring artists, musicians, and writers, as well as math and science wizards. Your goal is to teach the rest of the world how particle physics is everywhere and how it affects our lives in many ways.

The Awards


Cern offer many projects along with visits/courses to students and teachers

- Summer teacher programs
- High School internships
- School competitions (i.e particles for you)
- International masterclasses
- World wide data day etc

Invitation

Nehru Science Centre
cordially invites you for the Inauguration of

**INTER-SCHOOL
SCIENCE
QUIZ
CONTEST**
on
29th September 2016
at 11.00 AM
Chief Guest
Mr. Dilip Sen
Bollywood Music Director
& Composer

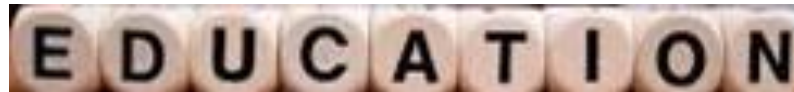
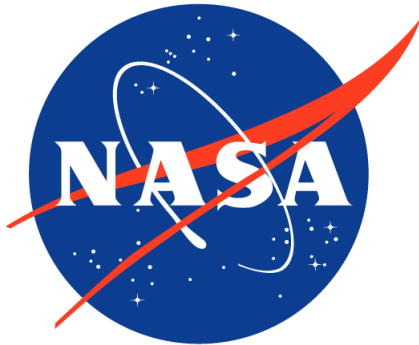


organised by
Nehru Science Centre
National Council of Science Museums, Ministry of Culture, Govt. of India
In association with
ROTARY CLUB OF BOMBAY PIER
ROTARY CLUB OF BOMBAY QUEEN CITY

Venue : **Nehru Science Centre**
(National Council of Science Museums, Ministry of Culture, Govt. of India
Dr. B. J. M. Road, Worli, Mumbai - 400 018, Tel: 022-2493 2667 / 2492 0482
Email: education@nehrucentre.gov.in | www.nehrusciencecentre.gov.in)

Market Research

- NASA - offers internships, cooperative education, programs, summer courses, after school activities, experiences for educators and students, website that shows the 25 different education programmes they offer.
- U.N - offers classes to schools for day activities, summer academy



Innovation

- IB physics syllabus (2014)
 - Internal Assessments
- 23 IB schools in Switzerland
 - Cern receives least visits from Swiss schools.
- Organised visits with experts, lab experiments, online IB work booklets, teacher workshops, shadow workers
- Improve communication with schools
 - School newsletters



Innovation

- Masterclasses, competitions and summer courses
 - Not promoted or organised thoroughly
 - Flaws in programmes
 - Example : Beamline Competition

- Promotion of events
 - Social media, school newsletters
- Accomodation of teaching to students
- Communication and time of competitions



Marketing and Branding

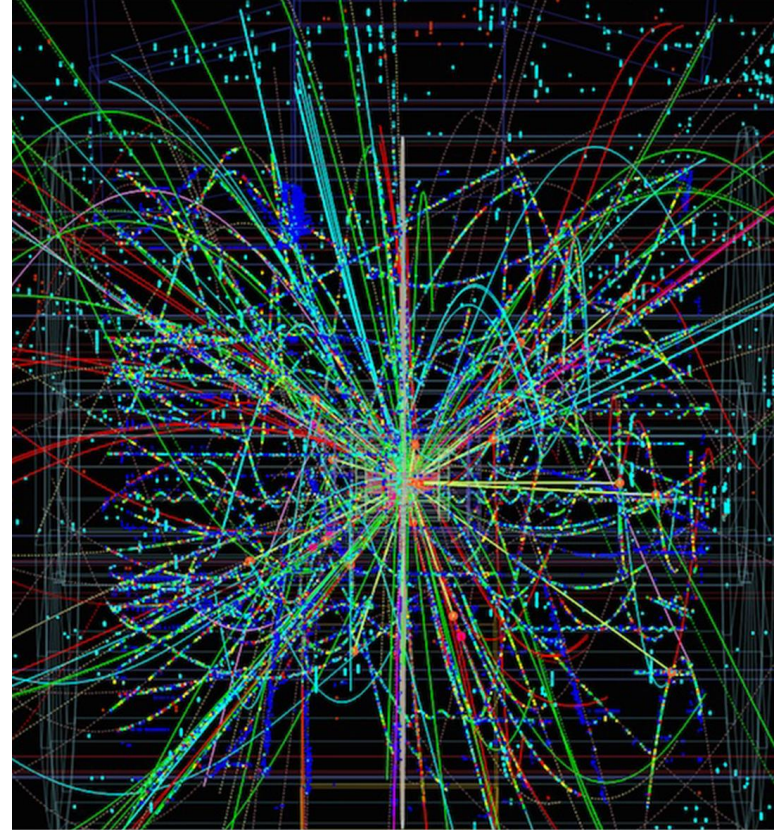
Summer courses

- Flyers and posters to be put around schools
- Ads on the IPPOG website

Facebook groups

- updates
- upcoming events
- embedded into the CERN website for easy access

More science based extracurricular activities



SIGN UP FOR THE **CERN SUMMER PROGRAM**
FUN, INTERACTIVE, EDUCATIONAL.

ROUTE DE MEYRIN, 385. 0227678484



Task 4

Prepare a fundraising strategy, which engages funding agencies, foundations and big businesses to consider supporting our work.

Think about which parts of the business would be interested in supporting our work.

Market Research: Business Alliances - Stem Next



OUR TEAM OUR APPROACH OUR INVESTMENTS NEWS AND IDEAS



STEM Next

Charging stations rely on power grids to provide energy and connectivity. STEM Next acts as a power grid for the charging stations of STEM learning – schools, afterschool and summer programs, youth centers, science museums, libraries, universities, and the private sector.



Afterschool & Summer Programs

Afterschool, youth development and summer programs spark kids' interest, build their skills, and introduce mentors and career possibilities that fuel kids' persistence to succeed. STEM Next builds partnerships and systems that expand and improve STEM programs of all kinds.



Schools

Schools teach students the skills, habits of mind, and scientific, mathematical, and engineering practices embodied by successful STEM professionals. STEM Next links schools and other charging stations to benefit kids.

- ❖ Infusing STEM into the existing programming
- ❖ Making the case for afterschool
- ❖ Developing the next generation of prototypes, frameworks, and tools



Science Centers

STEM organizations like science centers, museums, and universities inspire people of all ages about the wonders and meaning of science in their lives. STEM Next links science centers and other charging stations to deepen the impact of STEM learning for all.



STEM Funders

Public and private funders provide resources, ideas, and initiatives to link and grow STEM learning opportunities. STEM Next identifies key priorities and gaps, catalyzing new and ongoing investments where they are needed most.



STEM Employers

Public and private sector STEM employers must be at the forefront of reshaping STEM education. STEM Next strives to expand and diversify the pipeline of future STEM workers and leaders.

- ❖ 78% of students said they are more interested in STEM
- ❖ 73% of students said they had a more positive STEM identity
- ❖ 80% of students said their STEM career knowledge increased

Market Research: Business Alliances - MICROSOFT (\$86.5m)

Microsoft Store Products Support

Search Microsoft in Education

Education School leaders Educators Students Higher ed Products Training News How to buy CONTACT SALES

Budget-friendly devices for every classroom starting at \$189

Education / Educators / STEM Lessons

Hacking STEM Lessons & Hands-On Activities

Build affordable inquiry and project-based activities to visualize data across science, technology, engineering, and math (STEM) curriculum. Middle school standards-based lesson plans written by teachers for teachers.

¡AHORA LOS PLANES DE LECCIONES ESTÁN DISPONIBLES EN ESPAÑOL! >

Category	Price	Rating
Elementary	1.75	100%
Middle	1.75	5%
High School	1.75	



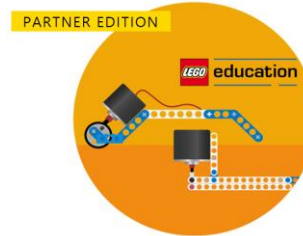
Harnessing Electricity to Communicate



Building Machines that Emulate Humans



Using Computational Thinking to Understand Earthquakes



Using Pythagorean theorem to Measure Topography



Measuring Water Quality to Understand Human Impact




Market Research

Competitive Analysis - Educational Alliances



Topics

Welcome to NASA Mission Control Measuring the Universe Exploring the Universe See descriptions ▾

 <p>Welcome to NASA Mission Control 0 of 1 complete</p> <p>Welcome to NASA Mission control, an introduction to the learning and exploration adventures offered in cooperation between NASA and Khan Academy!</p>	<p>Welcome</p>
 <p>Measuring the Universe 0 of 49 complete</p> <p>How have we applied science and mathematics to understand our solar system?</p>	<p>Modeling the solar system Spectroscopy</p> <p>Measuring the solar system</p> <p>Orbital mechanics 1</p>
 <p>Exploring the Universe 0 of 58 complete</p> <p>Centuries of observations ignited curiosity about other bodies in our solar system. Eventually, we reached out and touched them...what did we find?</p>	<p>Mars: Modern exploration Curiosity rover: discoveries</p> <p>Mars: Ancient observations</p> <p>Curiosity rover: mission briefing</p>



- ❖ Translated into dozens of languages
- ❖ 100 million users worldwide each year
- ❖ 10 million users subscribed



Rajesh Parameswaran 3년 전

Fortunately today i come to know about this site. it is absolutely awesome. As a teacher is very useful to me. Thank you for khan academy.

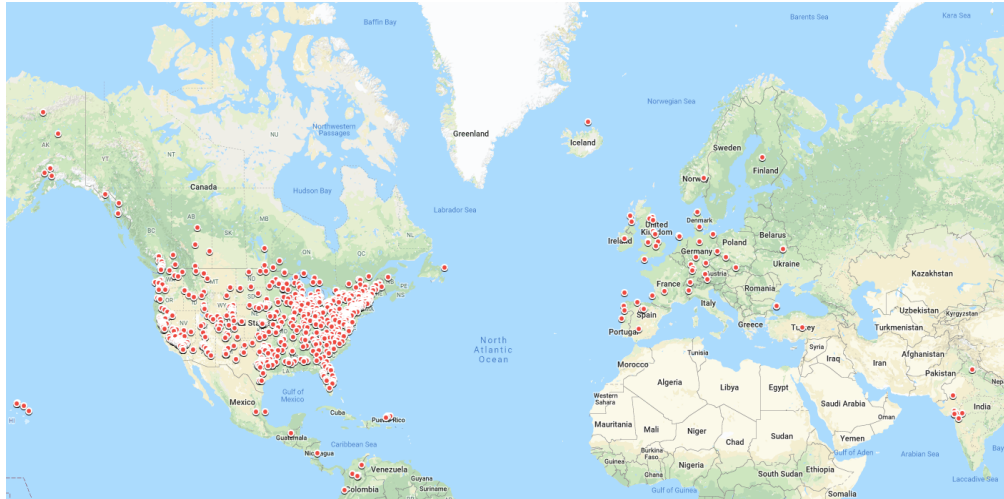
Gabriel B. 5년 전

i love his videos. he makes complicated things look simple



Market Research

Competitive Analysis - Educational Alliances



U.S. Partners International Partners

Organization	City	Country
Armagh Planetarium	Armagh	United Kingdom
ARTIS - Amsterdam Royal Zoo	Amsterdam	Netherlands
Association of Brazilian Planetariums	Porto Alegre	Brazil
Astronomical Observatory Universidad Sergio Arboleda	Bogota	Colombia
ASTROS	Kiev	Ukraine
At-Bristol Science Centre	Bristol	United Kingdom
Auriga Astronomy at Magna Science Centre	Belper	United Kingdom
Bathurst Observatory Research Facility	Bathurst	Australia
Blackrock Castle Observatory	Cork	Ireland
Brahmand Darshan	Tandulwadi	India
Brno Observatory and Planetarium	Brno	Czech Republic
Busan National Science Museum	Gijang-gun	South Korea
Canberra Deep Space Communications Complex	Tidbinbilla	Australia
Centro Astronómico Tiedra	Tiedra	Spain
Centro de Difusion de Ciencia y Tecnologia, IPN	Mexico D. F	Mexico
Changwon Science Center	Changwon-si	South Korea

900 U.S. and **100** international



Innovation

- Ted talks located in Cern with youth:
 - Educational
 - Directed at families and students
 - Entry fees to raise funds





- Partnering with businesses who have interest in helping STEM education.
 - Future scientists
 - Businesses involved with Cern
 - Microsoft, Huawei, Intel, Oracle, Amazon, Siemens...

- Partnering with museums and STEM events
 - Technorama (immersive multimedia)



Marketing and Branding

- New website
- New magazine
- Reach out to other STEM learning systems
- Big technology companies:
 - Google
 - Microsoft
 - Santander
 - IBM
- All have STEM outreach programs





International Particle Physics Outreach Group

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The International Particle Physics Outreach Group (IPPOG)

IPPOG is a network of scientists, science educators and communication specialists working across the globe in informal science education and outreach for particle physics. Particle physics is the science of matter, energy, space and time. IPPOG brings new discoveries in this exciting field to young people and conveys to the public that the beauty of nature is indeed becoming understandable from the interactions of its most fundamental parts - the elementary particles.

Current members come from the 22 member states of CERN, Brazil, Australia, Ireland, Slovenia, South Africa, the USA, and from DESY, CERN, five of the major experiments at the Large Hadron Collider (LHC), and the Belle II experiment at KEK's SuperKEKB accelerator in Japan.

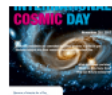
Hans Peter Beck (University of Bern) and Steve Goldfarb (University of Melbourne), IPPOG Chairs

Physics Slam

To increase enthusiasm and basic understanding of physics among a general audience



Latest Resources



6th International...

To inform about the 6th International Cosmic Day

0 comments



Particle Physics...

4 books for teachers and students which can be used for lectures about particle physics

0 comments



Build Your Own...

To attract attention and get people to talk to physicists.

0 comments

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WELCOME



The **CERN Courier** website brings you online articles from the print magazine and a variety of resources for the high-energy physics community.

FEATURE OF THE MONTH



China's bid for a circular electron-positron collider

Jun 1, 2018
Physicists in China have completed a conceptual design report for a 100 km-circumference collider that, in conjunction with a possible linear collider in Japan, would open a new era for high-energy physics in Asia.

[Continue reading this article](#) ▶

NEWS

SuperKEKB steps out at the intensity frontier

LHC physics soars ahead

KLOE-2 completes data-taking at Frascati Φ -factory

OPERA concludes on tau appearance

US and India team up on neutrino physics

Higgs boson reaches the top

ALICE probes partons inside lead nuclei

Central exclusive production at LHCb

Trigger-level searches for low-mass dijet resonances

LATEST ISSUE



CERN Courier
June 2018
Volume 58 Issue 5

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FEATURES

CERN thinks bigger

"What is the origin of the universe? This very simple question lies at the heart of all your work and forms the basis of the ambitions for the Future Circular Collider study!" – José van Dijk, president of the Royal Netherlands Academy of Arts and Sciences.

China's bid for a circular electron-positron collider

Physicists in China have completed a conceptual design report for a 100 km-circumference collider that, in conjunction with a possible linear collider in Japan, would open a new era for high-energy physics in Asia.

CERN's prowess in nothingness

A constant flow of challenging projects, a wealth of in-house expertise and the freedom to explore ideas

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Subscriptions: Receive 10 copies of *CERN Courier* a year, completely free. To sign up, **contact your nearest distribution centre.**

KEY SUPPLIERS

HuihongFiber

JANIS
Cryogenic Systems

[More companies](#) ▶

FEATURED COMPANIES

Accu-Glass Products, Inc.
CRYOGENIC APPARATUS SUPPLIER SINCE 1954



E4
WHEN PERFORMANCE MATTERS
COMPUTER ENGINEERING

LUDEN

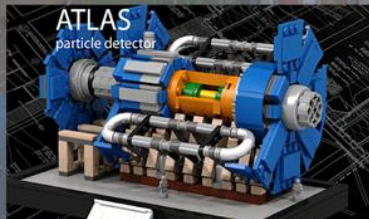
UPCOMING EVENTS:



SUMMER CAMPS

Put your child on the pathway to STEM learning this summer. Spots are going fast for CERN's weeklong camps, June 4-Aug. 17. Our camps for ages 6-9 are almost completely full, but there's still space in the ages 4-5 and 10-11 camps.

[VIEW](#)



ATLAS particle detector

BUILD YOUR OWN PARTICLE DETECTOR

A programme to impart knowledge of and enthusiasm for particle physics to essentially all non-expert target audiences by the use of LEGO bricks and models of particle physics experiments built from these. Find more information at <http://www.build-your-own-particle-detector.org/>

[VIEW](#)



Intl. Day of Women and Girls in Science

The United Nations General Assembly adopted a resolution in December 2015 and declared February 11th as the International Day of Women and Girls in Science. This date should be recognised as a global celebration on equal participation and the accomplishments of female scientists; see <http://www.un.org/en/events/women-and-girls-in-science-day>.

[VIEW](#)

Masterclasses summer 2019

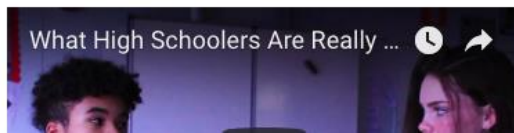
Mrs. Jacobson



Get to know what teachers speak about during lunchtime, her thoughts on the Walmart Yodelling Boy and more!

hazel, diya and jordan / 24/05/2018 / Features - Student Life, Student Life, Uncategorized

What La Chat Is Really Wearing



Gary Gibbon: TV Impartiality Rules, Privacy of Politicians and His Path to Journalism



Gary Gibbon, the political editor at Channel 4 news recently spoke to the Update

theupdateecolint / 17/05/2018 / Guest Speakers - Student Life, Student Life, Student Organisation for International Affairs, World Events

Comment: *PLASTIC; How and Why Our Exploitation of the Ocean Must Stop!*



Would you like to have some more cardboard in that soup? How and why our exploitation of the ocean must stop!

theupdateecolint / 15/05/2018 / Comment, Student Life, Uncategorized, World Events

Outreach programs leads

- Google
 - Allison Lieber (Program Manager, Google Earth Outreach)
 - Science programs
- Microsoft
 - Michael Van Der Bel (Microsoft Head of EMEA)
 - YouthSpark
- IBM
 - Constance Board (IBM Head of Europe region)
 - KidSmart
- Santander
 - Educational Scholarships & Universities
 - Andy Smith (Head of Media Relations, Santander)



Finance

TASK 1	
App Development	10 677.87
Ads, Flyers, Banners	996.58
HappyOrNot	1 035.00

APPROX: CHF 13 000 (CHF 12 709.45)

Finance

TASK 2	
Video Editor	4 816.00

APPROX: CHF 5 000

Finance

TASK 3	
Newsletter Writer	6 460.00
Summer Camp	2 292.15
Newsletter Editor	5 400.00

APPROX : CHF 14 000 (CHF 14 152.15)

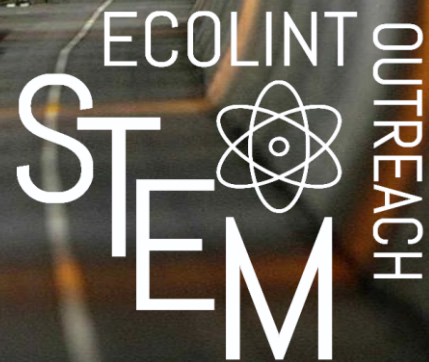
Finance

TASK 4	
TEDx	Free
Website	4 000.00

TOTAL : CHF 4 000.00

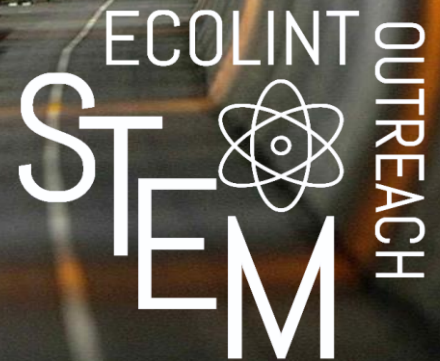
Outreach Program

ECOLINT
STEM
OUTREACH

The logo consists of the word "ECOLINT" in a sans-serif font at the top. Below it, the word "STEM" is written vertically in a larger, bold, sans-serif font. To the right of the "E" in "STEM" is a stylized atom symbol with three elliptical orbits. To the right of the "M" in "STEM" is the word "OUTREACH" written vertically in a smaller, sans-serif font.

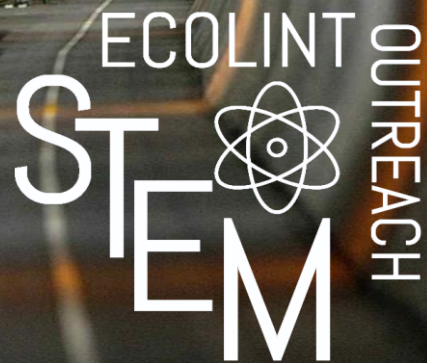
Thank you

ECOLINT
STEM
OUTREACH



Any questions?

ECOLINT
STEM
OUTREACH

The logo for ECOLINT STEM OUTREACH is located in the bottom right corner. It consists of the word "ECOLINT" in a sans-serif font at the top. Below it, the word "STEM" is written in a larger, bold, sans-serif font, with an atom symbol (a central circle with three elliptical orbits) positioned between the 'S' and 'M'. To the right of "STEM", the word "OUTREACH" is written vertically in a smaller, sans-serif font.

CEO

Cecilia Longoni

Deputy CEO

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