



Ecole Internationale de Genève
International School of Geneva



STEM Centre^{EIG}

“GAIA”

Programme 2019 – 2020

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STEM Centre[®]

THINK, CREATE, INNOVATE!

STEM stands for “science, technology, engineering and mathematics”: it suggests an integrated approach to these domains whereby science and mathematics are learnt through interdisciplinary projects that use technology and the principles of engineering. Although interdisciplinary learning should not be restricted to these areas, STEM provides particularly useful opportunities for meaningful, innovative practice that reflects the increasingly integrated nature of real-world scientific research.” (Guiding Principles for Learning, p.19)

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EDITORIAL

D'après de nombreuses religions, cultures autochtones et communautés scientifiques, la Terre, notre planète, est bel et bien vivante. En fait, d'après une hypothèse scientifique formulée par James E. Lovelock, il s'agit d'un vaste superorganisme nommé «Gaïa» qui s'autorégularise grâce à un système physiologique dynamique constitué par l'ensemble des êtres vivants, de leur environnement et de la biosphère. Ce système «intelligent» géobiochimique maintient la planète en vie en favorisant son métabolisme, évolution ainsi que son homéostasie. Gaïa, aussi déesse mère de la mythologie grecque, génère de l'oxygène, de l'eau, de l'énergie et autres ressources en cycles continus pour nous, les humains. C'est pour cette raison que nous devons cesser de lui infliger des plaies sur son épiderme, qui, avec le temps, ne sauront plus guérir. Vu que les êtres vivants ont une influence au profit de l'ensemble de l'écosphère et vu le pronostic alarmant pour l'avenir, nous devons, à l'aide de la science, de la technologie et de nos croyances, trouver des solutions durables pour sauver ce joyau qu'est notre Terre.

Du point de vue didactique, cette métaphore heuristique de la Terre vivante, convient à l'enseignement de concepts liés à l'environnement et la durabilité. Le programme que vous offre le STEM Centre pour l'année académique 2019-2020, ainsi que l'évènement interdisciplinaire phare, le défilé de mode STEM «Mythes & Légendes», développés autour de l'hypothèse Gaïa, serviront d'ancres pour la découverte de ce système planétaire vivant basé sur plusieurs constatations écologiques, climatologiques, géologiques et biologiques. Sur ce, avec toutes les opportunités proposées, nous espérons que des discussions animées, des actions engagées et des projets innovateurs en résultent!

Marie-France Labelle

Directrice / STEM Centre Director

PRESENTATION

The STEM Centre was conceptualized by ABCP Architecture in collaboration with INITIAL, EPFL and the LGB STEM team. The three goals behind the design of the space were to facilitate cross-discipline communication and productive collaboration, to emphasize non-formal non-traditional teaching and learning (inverted classroom), and to encourage divergence in thinking and experimenting through hands-on authentic learning opportunities. It was also important to foster, in an extra-ordinary space, every student's learning journey (feel, ask, imagine, plan, create, discuss, reflect, share) and to develop competences such as collaboration, creativity, critical thinking and communication. After several years of planning, the STEM Centre was inaugurated at La Grande Boissière campus in September 2016.

The STEM Centre is an open space divided up in 4 major areas of approximately 102m²: the Idea Lab (idealization, collaboration and creativity space), the Innovation Lab (critical thinking, building and developing space), the Bot Lab (robotics, prototyping and testing space) and the Bubble (implementation, reflection and presentation space). The STEM Centre is primarily a place where students can expand their thinking by creating and solving open-ended problems involving robotics, electronics, programming and design. With bright open spaces to imagine new worlds, wall-to-wall whiteboards to brainstorm and hypothesize, and state-of-the-art equipment to explore and experiment, the STEM Centre creates the ideal atmosphere for students to dream, invent and keep up with advancements in an ever-changing digital world.

Combining different subjects, but also different year groups, we aim to merge various elements of the curriculum to encourage innovative ways of thinking and building. As a result, every day is a success as our students become ever more curious about the world around them, and come up with projects that captivate both their classmates and teachers. In close collaboration with the Centre des arts on the campus, we marry the digital arts, the sciences and mathematics bringing together the best possible conditions for learning, creating, experimenting, thinking, and innovating.

The fundamental aim of the STEM Centre is to host 21st century learning experiences that move away from traditional, theoretical, single-subject learning, and towards greater creativity through critical thinking, information literacy and interdisciplinary, project-based learning. To further this aim, we have developed projects with key academic institutions, such as the Ecole Polytechnique Fédérale de Lausanne (EPFL) and the Universities of Geneva (UNIGE), as well as leading organizations in the technology and engineering sectors, such as CERN/IPPOG, le CEDRE, Hands on Technology (LEGO®), ITU and others. The STEM Centre, along with our partners, enable students to gain understanding of big ideas in science and mathematics, key STEM methodologies and core STEM skills.

The STEM Centre has become the headquarters for a number of pedagogical projects, events, enrichment courses, workshops and clubs. Since its opening, it has already enabled our students from 5 to 18 years old to gain new skills in areas such as programming, electronics, robotics, 3D printing and laser cutting, space exploration, digital mapping, product design and creation. STEM projects are not just about science, technology, engineering and mathematics; they are also about ethics, sustainability, creativity and problem solving, so, when in the STEM Centre “Think, Create, Innovate!

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1. CALENDAR AT A GLANCE

CALENDAR AT A GLANCE

LEGEND:

- Campus** = for all year levels
- Primary School** = Years Pre-Reception to 4
- Middle School** = Years 5 to 8
- Secondary School** = Years 9 to 13
- TBC** = the exact date is to be confirmed

SEPTEMBER 2019

Mon 9 to Fri 20 September

STEM Discovery Weeks

(Campus)

Event

Mon 9 September

ECA, Service/CAS Experiences Begin

(Campus)

Important Date

Mon 23 September

Ecole à la Ferme du Lignon

(Pri School Y2)

Trip, Curricular Project

Thu 26 September

Astronomie à l'école - Planétarium

(Pri School Y2)

Curricular Project

September (TBC)

CERN S'Cool Lab

(Sec School Y12-13)

Trip, Curricular Project

OCTOBER 2019

Mon 7 to Tue 8 October

Stellarium Gornergrat & Zmutt Dam

(Sec School Y11)

Trip

Wed 16 October & Wed 6 November

PTA Resolving Conflict Workshop

(Parents)

Workshop

Fri 18 to Sun 20 October

The Alliance for International

Education Conference

(Campus)

Event, Conference

October (TBC)

Enigma and the Secret World of Codes and

Code Breaking by James Grimes

(Sec School Y10)

Speaker, Workshop

NOVEMBER 2019

Tue 5 to Fri 22 November

Disruptive Innovation Festival (DIF)

(Sec School Y11-13 & Parents)

Online Event, Curricular Project

Wed 16 October & Wed 6 November

PTA Resolving Conflict Workshop

(Parents)

Workshop

Tue 12 November

Diabetes Day

(Sec School Y12)

Event, Trip

Sat 16 November

Designathon

(Mid School Y6-8)

Event, Curricular Project

Mon 20 to Fri 22 November

Journées d'information EPFL

(Sec School Y11-13)

External Event

Sat 30 November

First LEGO League (FLL) City Shaper

Practice Tournament

(Mid & Sec Schools Y5-10)

Event, Competition

November (various dates)

Engaging for Action SDG Campus Project

Launch

(Campus)

Event, Curricular Project

DECEMBER 2019

Mon 2 to Sun 8 December

Swiss Computer Science Education Week

(Campus)

Event

Thu 5 to Thu 12 December

Médecine de précision by Marie-Claude

Blatter (Swiss Institute of Bioinformatics)

(Sec School Y12)

Speaker, Workshop

Fri 6 December

e-Sports 1

(Sec School)

Event, Competition

December (TBC or June)

Spoken Word Poetry & CinePoetry by Randy

Kelly & Jamaal Jackson Rogers

(Sec School Y9)

Workshop, Curricular Project

JANUARY 2020

Sat 11 January

First LEGO League (FLL) City Shaper

Regional Tournament

(Mid & Sec Schools Y5-10)

Event, Competition

Wed 15 January

Bricks 4 Kidz® - DUPLO® Workshop

(Prim School Y1-2)

Workshop

Wed 22 January

Bricks 4 Kidz® - LEGO® Technic Workshop

(Prim School Y3-4)

Workshop

January (TBC)

SDG Space Solution Design Project Launch

(Sec School Y11-12)

Curricular Project

FEBRUARY 2020

Sat 8 to Sun 9 February (TBC)

Maths ISMTF Junior Competition

(Sec School Y10-11)

Event, Competition

Mon 10 to Fri 14 February

Structures géantes KAPLA

(Prim School)

Workshop, Curricular Project

CALENDAR AT A GLANCE

Tue 11 February
Safer Internet Day
(Campus)

Event

Tue 11 February
Girls do Physics Social Media Campaign
(IPPOG)
(Campus)

Event

MARCH 2020

Thu 5 March (TBC)
CERN IPPOG Particle Physics International
Master Classes Begin
(Sec School)

Important Date

Fri 13 March
World Pi Day Celebration
(Sec School)

Event

Sat 14 to Sun 15 March (TBC)
Swiss Young Physicists' Tournament (SYPT)
(Sec School Y10-12)

Event, Competition

Sat 14 to Sun 15 March (TBC)
Maths ISMTF Senior Competition
(Sec School Y12-13)

Event, Competition

Thu 19 March
STEM CENTRE MYTHS & LEGENDS
FASHION SHOW
(Campus)

Featured Event, Exhibition

Mon 16 to Fri 20 March
Brain Awareness Week & Blue Brain Project
(Sec School Y11-12)

Event, Trip

Fri 27 March
e-Sports 2
(Sec School)

Event, Competition

Mon 30 March to Fri 3 April
World Summit on Information Society
(WSIS) 2020 Youth Track
(Mid & Sec Schools)

Event, Workshop, Exhibition

APRIL 2020

Mon 30 March to Fri 3 April
World Summit on Information Society
(WSIS) 2020 Youth Track
(Mid & Sec Schools)

Event

Sat 4 to Sun 5 April (TBC)
Maths ISMTF Middle School Competition
(Mid & Sec Schools Y8-9)

Event, Competition

Mon 6 to Sun 12 April
Open Geneva Hackathons
(Sec School)

Event

Tue 7 April
Registration opens for First® LEGO®
League (FLL)

Important Date

Mon 13 to Fri 17 April
CERN South Asia Science Education
Program in Bhutan
(Sec School Teachers)

Trip, International Cooperation Project

Mon 20 to Fri 24 April

**Animation Cosedec & le CEDRE:
Sensibilisation à la gestion des déchets
(Prim School FR)**

Curricular Project

Wed 22 April

**Earth Day & Engaging for Action SDG
Project Exhibition
(Campus)**

Event

Mon 27 April

**Ecole à la Ferme du Lignon
(Pri School Y2)**

Trip, Curricular Project

MAY 2020

Mon 4 May

**Ecole à la Ferme du Lignon
(Pri School Y2)**

Trip, Curricular Project

Thu 21 to Sun 31 May

**Mapping Festival
(Sec School)**

External Event, Workshops

Tue 26 May (TBC)

**Open Geneva: Fête de l'innovation
(Sec School)**

External Event

May (TBC)

**Creating Ambassadors for Science
in Society (CASS) (IPPOG)
(Sec School)**

Workshop

May-June (various dates)

**Lac Léman Beach Cleanup
(Campus)**

Curricular Project

JUNE 2020

Fri 5 June

**World Environment Day
(Campus)**

Event

Tue 16 to Thu 18 June

**Annual STEM Centre Exhibition
(Campus)**

Event

Tue 23 June

**International Women in Engineering Day
(Campus)**

Event

Mon 22 to Wed 24 June (TBC)

**Technorama Trip
(Sec School Y9)**

Trip



2. EVENTS

Events in the STEM Centre are open primarily to Ecolint students and its community. They are generally free of charge.

Campus events are organized and lead by the STEM Centre Director or others such as campus Technology for Learning Coordinators, Heads of Departments, teachers, students, and/or the Parent-Teacher Association (PTA). Information on how to book the space(s) in the STEM Centre can be found in the Rules and Registration section of this booklet. We reserve the right to add events to the current programme if excellent opportunities arise.

GENERAL

STEM DISCOVERY WEEKS

Campus

Mon 9 to Fri 20 September, 2019

15:00-18:00

Location: STEM Centre



The STEM Discovery Week gives students an idea of the opportunities that will be on offer in the STEM Centre for the academic year (i.e. ECA and ULP clubs). Throughout the week, there will be hands-on activities, exhibits, and discussions/presentations with teachers and STEM leaders.

PTA RESOLVING CONFLICT WORKSHOP

Parents

Wed 16 October &

Wed 6 November, 2019

Location: STEM Centre

Registration will open in September through PTA.

The two workshops entitled *Resolving Conflict through the Art of Listening and Listening without Judgment* will explore techniques in averting and diffusing conflicts by honing our deep, non-judgmental listening skills. Former war reporter, family therapist and life coach, Siobhan Darrow, will share tools to become listeners that are more effective in order to deepen our relationships with our children, our spouses and with people in all areas of our lives.

ALLIANCE FOR INTERNATIONAL EDUCATION CONFERENCE

Campus

Fri 18 (9:00) to Sun 20 (13:00) October, 2019

Location: STEM Centre & Other

Registration: www.intedalliance.org/conferences/2019-rethinking-international-ed/

Ecolint is proud to be hosting the 2019 Alliance for International Education Conference, Rethinking International Education – Values and Relevance. Following the success of the series of World Conferences previously held, the programme will be an exciting mixture of activities and social events throughout the three-day period. The main feature of the conference, as for previous events, will be the opportunity for all participants to engage in a series of “strand groups” within which those participants who choose to do so will give short presentations on topics related to the overall theme of the conference, followed up immediately by engagement in discussion and debate by the group. (Alliance for International Education, 2019)

DISRUPTIVE INNOVATION FESTIVAL 2017 (DIF)

Sec School Y11-13

Tue 5 to Fri 22 November, 2019

Location: Online - www.thinkdif.co

The DIF is the world’s largest online festival of ideas that asks: what if we could redesign everything? Examples of topics discussed by experts this year are: Circular Economy 101, Cities in Transition, Future of Food, Materials & Design, People in the Economy, Reimagining Learning, Reinvventing Business and Thinking in Systems. “The DIF is about learning... it’s about dipping in and out of ideas, it’s about broadening your mind.” (Dame Ellen MacArthur).



DIABETES OPEN DAY

Sec School Y12

Tue 12 November, 2019

Location: Centre Médical Universitaire (CMU), Université de Genève



As part of the IB DP Biology course, the students will be able to attend the 16th Open House by the Faculty of Medicine (Faculty of Diabetes) to meet with researchers and doctors who are conducting ongoing research on diabetes in Geneva. On World Diabetes Day, a unique opportunity to understand the biological mechanisms leading to diabetes and how they are being studied will be possible through a thematic route with à la carte stations. A dozen stands, led by researchers, will allow our students to discover the various origins of diabetes, the role of the brain in food intake and the physiological function of insulin in the metabolism.

DESIGNATHON

Mid School Y6-8

Sat 16 November, 2019, 9:30-17:30

Location: STEM Centre



Our students will have the opportunity to join the Global Designathon 2019 with children from all over the globe to design solutions for a better world. This year's theme will be "Food and Climate Actions", a SDG topic relevant and accessible to everyone. Our students will work in small teams to create solutions, build prototypes and present them to a panel of judges and parents.

For more information: <https://drive.google.com/file/d/0Bzmd4boRpoHccVBZZXduUmxCZmVCM1Jocm52MFdDSnEtWGFR/view>

JOURNÉES D'INFORMATION EPFL

Sec School Y11-13

Mon 20 to Fri 22 November, 2019

Location: EPFL –
Swiss Tech Convention Center

Inscriptions dès septembre 2019

Chaque année, l'EPFL, via son service de promotion des études, et en collaboration avec ses facultés, se réjouit de vous accueillir nombreux sur son campus pour vous faire découvrir ses filières de formation, ainsi que sa communauté d'étudiants, d'enseignants et de chercheurs, les divers services dédiés aux nouveaux étudiants et les multiples associations chargées d'animer la vie sociale et culturelle du campus. Cet événement incontournable est une réelle immersion qui vous aidera à faire un choix réfléchi et éclairé pour votre avenir, et vous permettra d'apprécier le foisonnement scientifique et la diversité qui caractérise l'école.

Pour plus d'information :
www.epfl.ch/education/bachelor/fr/journees-d-information/

SWISS COMPUTER SCIENCE EDUCATION WEEK

Campus

Mon 2 to Sun 8 December, 2019

Location: STEM Centre & Other



During this annual international week of computing, thousands of students in Switzerland and around the world will be programming at all levels. The school will give students opportunities to engage in programming experiences in the world of creating games, applications, and hacking awareness. There will also be various organized ICT activities on all Ecolint's campuses linked with the Hour of Code. This initiative began a few years ago in the United States with the aim of raising the awareness on the importance of computing. The CSEd Week is organized in memory of the birthday of the computer pioneer, Admiral Grace Murray Hopper (December 9, 1906).

e-SPORTS

Sec School

Fri 6 December, 2019, 18:00-20:30

Fri 27 March, 2020, 18:00-20:30

Location: STEM Centre

Registration opens one week prior



e-Sports have gained popularity over the years. Official competitions around the world attract millions of players and spectators. The Swiss e-Sports Federation (SeSF) is a member of the International e-Sports Federation (ieSF). In fact, Switzerland is one of the founding members. The ieSF was created in 2008 and is based in Korea.

The LGB Tech Crew in collaboration with the STUCO organizes annual LGB e-Sports evenings during which individuals or teams compete in various video games (e.g. League of Legends, FIFA 19, Rocket League, Heartstone, etc...). Winners go home with trophies!

GIRLS DO PHYSICS SOCIAL MEDIA CAMPAIGN

Campus

Tue 11 February 2020

Location: STEM Centre & Other



Inspiring and empowering girls around the world to engage in physics or related STEM subjects. Girls, do Physics! is a social media (i.e. Instagram) campaign to inspire girls to become interested in and study physics and related STEM subjects. We hope that this will help break the stereotype that physics is more suitable for boys. The campaign, organized by IPPOG runs between February 11, the UN International Day of Women and March 8, the International Day of Women.

For more information: <http://ippog.org/girls-dophysics>

SAFER INTERNET DAY

Campus

Tue 11 February, 2020, 8:15-16:30

Location: STEM Centre & Other



Over the years, Safer Internet Day (SID) has become a landmark event in the online safety calendar. Starting as an initiative of the EU SafeBorders project in 2004 and taken up by the Insafe network as one of its earliest actions in 2005, Safer Internet Day has grown beyond its traditional geographic zone and is now celebrated in more than 100 countries worldwide, and across all continents." (Safer Internet Day, 2016). From cyberbullying to social networking, the school will organize activities to raise awareness of emerging online issues and will help students and parents reflect on specific topics of current concerns.

CERN IPPOG PARTICLE PHYSICS INTERNATIONAL MASTER CLASSES BEGIN

Sec School Y10-13

Thu 5 March to Mid-April, 2020

Location:

University of Geneva

Registration from January 2020.



Each year more than 13.000 high school students (15 to 19-year old) in 55 countries come to one of about 225 nearby universities or research centres for one day in order to unravel the mysteries of particle physics. Lectures from active scientists give insight in topics and methods of basic research at the fundamentals of matter and forces, enabling the students to perform measurements on real data from particle physics experiments themselves. At the end of each day, like in an international research collaboration, the participants join in a video conference for discussion and combination of their results. (IPPOG, 2019. Retrieved from <https://physicsmasterclasses.org/>)

WORLD PI DAY CELEBRATION

Sec School

Thu March 14, 2020, 8:15-16:30

Location: STEM Centre & Other



Pi Day is a holiday which is celebrated on March 14th every year. This day was created to celebrate the mathematical constant π . It falls on 3/14 since three, one and four are the first three digits of Pi. It is a holiday that has been celebrated large-scale since 1988 and has been celebrated by millions upon millions of math students and teachers since. While Pi Day may have existed in one form or another, the first official large-scale celebration occurred on March 14th, 1988 at the San Francisco Exploratorium. This event was organized by physicist Larry Shaw. This first celebration featured participants marching around a large circle and consuming fruit pies. Over the years, the Pi Day celebrations have become a little more complex and usually involve more activities. Therefore, on this day, students will have the chance to have fun with Pi during various activities. (Holidays Calendar, no date. Retrieved from <http://www.holidayscalendar.com/event/pi-day/>)

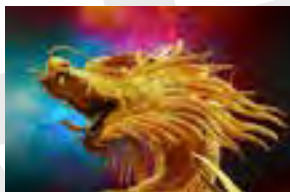
STEM Centre⁺ event

STEM CENTRE MYTHS & LEGENDS FASHION SHOW

Campus

Thu March 19, 2020, 19:00-20:30

Location: Centre des arts, Théâtre



The STEM Centre's annual Fashion Show is an interdisciplinary campus project that reveals how high fashion intertwines in innovative ways with art, design and engineering. This year's theme will engage students to explore how they can bring to life various aspects of myths and legends using STEM skills. All products presented on the runway are created by LGB students.

BRAIN AWARENESS WEEK

Sec School Y12

Mon 16 to Fri 20 March, 2020

Location: University of Geneva



During the Brain Awareness Week, the IB DP students will have the opportunity to challenge themselves through various activities, conferences, discussions and laboratory visits. The goal of this week's event, organized by the Geneva Neuroscience Center, is to inform the public about progress and benefits of brain research.

WORLD SUMMIT ON INFORMATION SOCIETY (WSIS) 2020 YOUTH TRACK

Mid & Sec Schools

Mon 30 March to Fri 3 April, 2020

Location: STEM Centre & ITU



WSIS aims to include youth perspectives and engage young people in discussions about how technology can provide opportunities to address some of the world's most pressing issues. It provides a platform where youth can offer their insights and understanding of the information society, its challenges and opportunities, and where they can raise questions; but also propose solutions to harvesting the power of ICTs towards equally distributed social impact. The week will be comprised of Hackathons, an exhibition, WSIS and Tech Labs workshops for younger students to experience VR, coding and robotics, and finally a Youth Café that our older students will organize and run. A full program will be published in the school newsletters.

GENEVA (HACKATHONS)

Sec Schools

Mon 6 to Sun 12 April, 2020

Location: STEM Centre & Geneva



Open Geneva is an Open Innovation Festival for science, technology and society. It was established to promote open innovation with a spirit of knowledge sharing for the common good. In particular, Open Geneva aims to foster open innovation for the arts, science, technology, and for society in the Greater Geneva Area. Students and parents are welcome to participate in various Hackathons held around the city or in the STEM Centre. Special projects are presented at the Innovation Festival at the campus Biotech in May 2020.

EARTH DAY

Campus

Wed 22 April, 2020, 8:15-15:00

Location: STEM Centre & Other



Because 2020 will mark Earth Day's 50th anniversary, we need to ensure that the day results in the most diverse global mobilization in defense of the environment in world history! Therefore, throughout the academic year and on the day itself we will put plans to take care of mother earth or Gaia into actions. An exhibition will showcase the completed projects from the Engaging for Action SDG Campus Project.

MAPPING FESTIVAL

Sec School

Thu 21 to Sun 31 May, 2020

Location: Geneva (Various)



Every year, the Mapping Festival, dedicated to audio-visual art and digital culture, organizes workshops and exhibitions that merge creativity and technology. Students are invited to attend and reflect on aspects of the artistic digital world. The official program is released in 2020.

CREATING AMBASSADORS FOR SCIENCE IN SOCIETY (CASS)

Sec School

May 2020 (TBC)

Location: STEM Centre & CERN



In the spirit of building bridges between science (or STEM) and society, Ecolint students have the chance to become true “Ambassadors for Science in Society” and work on challenging tasks given by International Particle Physics Outreach Group (IPPOG) during a specialized workshop. We will publish the details of the program in the school newsletters in April 2020.

For more information: <http://ippog.org/cass>.

WORLD ENVIRONMENT DAY

Campus

Fri 5 June, 2020, 8:15-16:30

Location: STEM Centre & Other



World Environment Day is held each year on June 5. It is one of the principal vehicles through which the United Nations (UN) stimulates worldwide awareness of the environment and enhances political attention and action. This year, LGB will take action and raise awareness on ways to improve the Earth's environment. Join us! This will be part of the Engaging for Action SDG Campus Project.

ANNUAL STEM CENTRE EXHIBITION

Campus

Tue 16 to Thu 18 June, 2020, 15:00-17:00

Location: STEM Centre

The Annual STEM Centre Exhibition is a showcase of curricular STEM projects designed and created by our students throughout the academic year. Come and be amazed by the STEM skills the students from our Primary, Middle and Secondary Schools have learned such as 3D printing, laser-cutting, programming, electronics, modelling, light painting, problem-solving, collaborating, and more, all in relation to real-life problems in the subjects of Science, Technology, Engineering and Mathematics.

INTERNATIONAL WOMEN IN ENGINEERING DAY

Campus

Tue 23 June, 2020, 8:15-16:30

Location: STEM Centre & Other

This annual day focuses attention on the amazing careers in engineering and technical roles for girls, and allows us to celebrate the achievements of outstanding women engineers. Join us for the celebration!

TOURNAMENTS

FIRST LEGO LEAGUE (FLL) CITY SHAPER TOURNAMENTS

Mid & Sec Schools Y5-10

Sat 30 November, 2019, 9:00-17:00

Sat 11 January, 2020, 9:00-17:00

Location: STEM Centre & Ecolint
La Chataigneraie Campus

Registration open on
www.first-lego-league.org

“Project-based, hands-on FIRST programs introduce students to coding, programming, and engineering in an inclusive, creative, and hopeful environment where students work collaboratively to solve a yearly robotics challenge” (FIRST, 2019). This year’s theme is City Shaper. The challenge is comprised of three parts: the Robot Game, the Project, and the Core Values. The cost is to buy needed LEGO boxes and covers the competition fees for the team.



SWISS YOUNG PHYSICISTS TOURNAMENT (SYPT)

Sec School Y10-12

Sat 14 to Sun 15 March, 2020

Location: TBC

Registration opens in September 2019

“The Swiss Young Physicists” Tournament (SYPT) is a competition, where physics enthusiasts from schools from anywhere in Switzerland participate. In so called Physics Fights three teams (each consisting of two to three students) compete against each other. They take turns presenting and defending their solution to a given problem, criticizing the solution of the opposing team and reviewing the performance of the two preceding teams. The performance of all three teams is assessed by a jury. The teams have to try to convince both their opponents as well as the jury of the quality of their scientific work and results and of the understanding of physics. The three rounds (on two days) are accompanied by a social program including opening ceremony, lunch, excursions, dinner and award ceremony after a final.” (Lenggenhager, 2017). In preparation for the tournament, there will be a one-week preparation course, the SYPT Physics Week. During this week, students work on their chosen problem while being supervised by SYPT-experienced coaches.

MATHS ISMTF SENIOR COMPETITION

Sec School Y12-13

**Sat 14 to Sun 15 March,
2020**

Location: TBC

**Registration through
the Maths department.**

MATHS ISMTF JUNIOR COMPETITION

Sec School Y10-11

**Sat 8 to Sun 9 February,
2020**

Location: TBC

**Registration through
the Maths department.**

MATHS ISMTF MIDDLE SCHOOL COMPETITION

Sec School Y8-10

Sat 4 to Sun 5 April, 2020

Location: TBC

**Registration through
the Maths department.**

“The ISMTF is a nonprofit foundation whose purpose is to provide support in the enrichment of teaching and learning of mathematics at international schools, nurture exchange of experiences among mathematics educators, and to help generate interest in and enthusiasm for mathematics among students of these schools.” (ISMTF, 2017)



TRIPS

The STEM Centre will exclusively organize exciting and educational trips for the academic year 2019-2020. The campus schools or STEM departments are offering other trips, at times, supported and promoted by the STEM Centre.

The registration for the following trips will be open to students from September 2019 or will be organized by the STEM Director and teachers accordingly.

S'COOL LAB CERN

Sec School Y12-13

September 2019 (TBC)

Location: CERN

Price: Free

Website: <http://scool.web.cern.ch/scoollab-workshops>

Le S'Cool LAB offre la possibilité aux élèves de manipuler pour eux-mêmes divers équipements en participant à des ateliers pratiques sur différents thèmes de la physique des particules lors de leurs visites du CERN. Certains ateliers (chambre à brouillard, rayons X, tube à électrons, supraconductivité, etc..) sont proposés.

ECOLE À LA FERME DU LIGNON

Pri School Year 2

Mon 23 September, 2019

Mon 27 April, 2020

Mon 4 May, 2020

Location: Ferme du Lignon

Price: 5 CHF / child

Website: www.schub.ch



Learn, Discover, Experiment. Thanks to "école à la ferme" providers across Switzerland, our students from the primary school will come into direct contact with life on the farm and get to know the origin of our food. L'école à la ferme is an apprenticeship that involves the five senses. By welcoming the children on their farms, peasant families offer an education which requires new faculties and resources. Touching, smelling, tasting and working together form the basis of a captivating and unforgettable education that has been a great success for 30 years. Over the past ten years, more than 250,000 students have benefited from the "école à la ferme" program and have permeated the many aspects of peasant life. Our students will specifically explore gardens and the chemin de l'oeuf as part of their inquiry units.

STELLARIUM GORNERGRAT AND ZMUTT DAM (ZERMATT) TRIP

Sec School Y11

Mon 7 to Tue 8 October, 2019

Location: Zermatt

Price: Approx. CHF 200
(includes transport, lodging, visit)

Website:

<https://stellarium-gornergrat.ch>



Students will have the chance to visit the famous Gornergrat Stellarium of central Europe. The program for the evening will include a presentation on the glaciers and mountains of Zermatt from a vista point, an interactive visit to the control room where students will learn and use various instruments, and finally access a telescopic view of the Moon and bright planets. Professors from the Center for Space and Habitability (CSH), University of Bern, will be present all evening to guide students and answer any of their questions. During the day, students will hike to the Zmutt hydroelectric dam in order to conduct research.

THE BLUE BRAIN PROJECT TRIP

Sec School Y11

Mon 9 to Fri 20 March, 2020

Location: EPFL, Biotech Campus,
Batiment B1, Chemin des Mines 9,
1202 Geneva

Price: Free

Maximum number of students: 30

Website: www.bluebrain.epfl.ch



The aim of the Blue Brain Project, a Swiss brain initiative founded and directed by Professor Henry Markram, is to build accurate, biologically detailed digital reconstructions and simulations of the rodent brain, and ultimately, the human brain. The supercomputer-based reconstructions and simulations built by Blue Brain offer a radically new approach for understanding the multilevel structure and function of the brain.

TECHNORAMA TRIP

Sec School Y9

Mon 22 to Wed 24 June, 2020 (TBC)

Location: Technoramastrasse 1,
CH-8404 Winterthur, Switzerland

Price: Approx. 250 CHF (TBC) (includes
lodging, museum fee, other activities)

Maximum number of students: 30

Website: www.eurospacecenter.be



Students will conduct hands-on experiences of hundreds of natural phenomena and technology. They will do so using all their senses to come to grips with the world that surrounds them. Through science, art, challenges, experiments, adventure rooms, dialogues and building, their curiosity will be aroused as well as their enthusiasm for science and technology. The Technorama trip might be combined with fun at the Adventure Park Rheinfal in order to discover nature from the treetops.

EURO SPACE CENTER

Sec School Y9-10

June 2021

Location: Rue Devant les Hêtres 1,
B-6890, Transinne, Belgium

Price: Approx. CHF 690-720

Maximum number of students: 30

Website: www.eurospacecenter.be

This trip will resume in 2021 due to the 2019-2020 renovations of the Euro Space Center.



We will prepare our students for take-off to the space station! They will be living and training like astronauts for a few days. The space mission simulator awaits them for a walk on the Moon or Mars; but first they will have to take the astronaut training course on the simulators. Science workshops are also planned so that they can build and launch their own rockets. Multimedia exhibitions as will teach them the history of space exploration and about daily life and work in space. Space adventurers, prepare for lift-off!

VOYAGE D'ÉCHANGE CANADA-SUISSE (SÉJOUR SCIENTIFIQUE)

Ecole secondaire

classes 10-11 francophones

Année académique 2020-2021

Location: Collège Charles-Lemoyne,
Montréal, Québec

Prix: A déterminer

Nombre maximum d'élèves: 10

Applications dès mars 2020
(les intéressés devront faire
une demande formelle).

Programme détaillé à venir.





3. EXTRA- CURRICULAR ACTIVITIES (ECA) AND WORKSHOPS

The extracurricular activities (ECA) and workshops are part of a campus wide program which offers students various opportunities to learn new skills through courses in STEM, in the arts, in sports or in other recreational domains. Professional instructors and coaches lead the activities. A fee is associated to each ECA or workshop. Note that ECA and workshops cater to specific year levels and require generally a minimum of 5 students to run. Registrations for ECA and workshop activities are done through the “MyEcolint” ECA school portal.

ECA GENERAL

PRIMARY SCHOOL

CREATIVE CRAFTS

Years 3-4

Course Instructor: Sonia Castejon

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Mondays 15:00 -16:30

Language of Instruction: English / Spanish

Location: STEM Centre

Maximum Number of Students: 10

Price: 800 CHF (incl. material)

Students will experiment and build on a wide range of model and design related concepts to create their own products.



CREATIVE VISUAL STORYTELLING (ANIMATION & PHOTOGRAPHY)

Years 3-4

Course Instructor: Paula Dias Leite

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Tuesdays 16:30 -18:00

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 10

Price: 820 CHF

During this after school activity, students will be introduced to basic/ Intermediate digital photography compositions, film animation, editing skills and graphic design for visual storytelling. Students will also have the opportunity to develop an aesthetical understanding of composition and visual narrative, as well as hands on industry software training. Throughout the year students will undertake creative and personalised projects allowing them to think before photographing. Working on storyboards, students will finally develop visual narratives applied to building block (Lego) film animation.



DESIGN & TECHNOLOGY : A FOCUS ON 3D MODELLING

Years 3-4

Course Instructor: Erik van Nielen

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Mondays 15:00 -16:30

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 10

Price: 820 CHF

Students will experiment and build on a wide range of model and design related concepts to create their own products.



DESIGN & TECHNOLOGY: A FOCUS ON CODING & ROBOTICS

Years 3-4

Course Instructor: Erik van Nielen & Paula
Dias Leite

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Thursdays 15:00 -16:30

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 10

Price: 820 CHF

This after school activity focuses on building and programming small robots. The main aim of this course is to show students how coding and robots are related to the real world. Students will work on a variety of platforms and present their code challenges in several presentations to the school community.



LEARN BUILD PLAY LEGO

Years 2-4

Course Instructor:

Amandine Urbani & Monica Mories

Timing: 9 September 2019

to 12 June 2020, Weekly for 1h00m

Thursdays 15:00-16:15

Language of Instruction: English / French

Location: STEM Centre

Maximum Number of Students:

16 (6 places Y1-2, 10 places Y3-4)

Price: 650 CHF

Bricks 4 Kidz® after-school classes build on the universal popularity of LEGO® Bricks to deliver a high quality of educational play. Children construct a new model each week based on exciting themes such as “Monuments Through Time” or ‘Energy is Everywhere’. It is a program that integrates science, technology, engineering and mathematics.



STORYTELLING AND 3D GAME DEVELOPMENT

Years 3-4

Course Instructor: Paula Dias Leite

Timing: 9 September 2019

to 12 June 2020, Weekly for 1h30m

Tuesdays 15:00 -16:30

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 10

Price: 820 CHF

During this after school activity, students will work on a purpose developed software to code and design 3D spaces as well as create gaming narratives using storytelling concepts. During the year the group will focus on climate change issues and themes.



PRIMARY SCHOOL AND MIDDLE SCHOOLS

“LES PETITS BRICOLOS” WOOD ART CRAFT

Years 3-8

Course Instructor: Maluen Prunier

Timing: 9 September 2019 to 12 June 2020, Weekly for 1h30m
Mondays 15:45-17:15 (Years 5-8)
Wednesdays 12:15-13:45 (Years 3-4)

Language of Instruction:

English / French

Location: STEM Centre

Maximum Number of Students:

8 (PS) - 10 (MS)

Price: 820 CHF (incl. material)

Come to the STEM Centre and learn how to make your own constructions in wood. You will be using your creativity by sketching and drawing your ideas onto paper before sawing, drilling, screwing, sanding and assembling pieces of wood together – to construct an item that is both ecological and durable! The children are also taught the benefits of teamwork and collaboration, as well as the need to respect some simple rules. To maximise the security of the children, only hand tools are used in this workshop.



3D DESIGN & PRINTING

Years 3-6

Course Instructor: Khailid Ali & other

Timing: 9 September 2019 to 12 June 2020, Weekly for 1h30m
Tuesdays 15:00-16:30 (Years 3-4)
Thursdays 15:45-17:15 (Years 5-6)

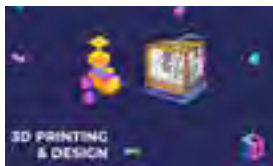
Language of Instruction: English / French

Location: STEM Centre

Maximum Number of Students: 12

Price: 750 CHF (incl. material)

Une expérience unique pour vos enfants: apprendre, modéliser, imprimer en 3D. Apprendre le dessin 3D sur ordinateur, jouer au tangram, construire avec la pâte à modeler et les aimants en 3Dimensions. Travailler le jeu d'équipe et comment planifier un projet. Des activités ludiques avec les plots. Projet pratique : créer son porte-clé, son bracelet et même son jouet. Puis terminer par colorier leurs objets imprimés. Des activités riches en créativité et en défis.



MIDDLE SCHOOL

COPAIN DES BOIS / FRIENDS OF THE WOODS

Years 5-8

Course Instructor: Katrin Oppliger

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h00m
Tuesdays 15:45-16:45

Language of Instruction: English / French

Location: Forest – meet at STEM Centre

Maximum Number of Students: 12

Price: 495 CHF (incl. material)

Cette activité se déroulera principalement dans la forêt sur le campus. Les enfants développeront leur créativité et leur connaissance de l'environnement. Ils découvriront chaque semaine de manière ludique une activité différente : chasse aux trésors, construction d'une cabane, découverte des arbres, des fleurs, des insectes, des oiseaux, accrobranche dans la forêt, cuisine botanique, et land art. Le plus important est d'être dehors et de se sentir libre d'explorer. Les activités ont lieu à l'extérieur, sauf en cas de très mauvais temps.



CRAFTS DESIGN & SEWING

Years 6-8

Course Instructor: Sonia Castejon

Timing: 9 September 2019
to 12 June 2020, Weekly for 2h00m
Thursdays 15:45-17:45

Language of Instruction: English / Spanish

Location: STEM Centre

Maximum Number of Students: 12

Price: 750 CHF (incl. material)

Students will be engaged in fun fabrics projects while learning the basics of hand and machine sewing. Projects could include tablet covers, bags, cushions, baskets, or whatever the students' imagination will take them.



CREATIVE MEDIA & COMPUTING

Years 7-8

Course Instructor: Alex Ornat

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Wednesdays 12:30-14:00

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 12

Price: 750 CHF

Participants will push their creativity to the limit as they harness professional creative software used in the industry today! Photo manipulation, graphic design, video editing, and 3D design are some of the areas in which they will create imaginative works that they can be proud of. Students will experience the creative process from start to finish in a variety of contexts, and acquire practical skills they can use in the years to come.



PRODUCT DESIGN LAB

Years 5-8

Course Instructor: Faysal Saber

Timing: September 2019
to 12 June 2020, Weekly for 1h30m
Mondays 15:45-17:15

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 12

Price: 850 CHF (incl. material)

Get ready to design your first smart object! Learn and apply the cycle of Design Thinking to create a series of working prototypes using block code, 3D design, 3D printing, LEDs, motors and sensors. With testing and iteration, we will shape these inventions into industrial products, presenting them at national innovation competitions where TechLabs has led students to victory.



MIDDLE & SECONDARY SCHOOLS

ADVANCED PROP-MAKING

Years 7-10

Course Instructor: Maxime Miraillet

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Wednesdays 16:30-18:00

Language of Instruction: English / French

Location: STEM Centre

Maximum Number of Students: 10

Price: 820 CHF

This course is designed to teach students the skills needed to build props for movies, cosplay, displays or other. Students will learn a variety of traditional and state of the art techniques to design and build props. From 3D printing and design, to laser cutting, sculpting, painting and weathering of figurines, masks, armour, and more, students will gain STEM skills for the industry.



ROBOTS BIENVEILLANTS

Years 7-11

Course Instructor: Arieh Lewertoff

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Tuesdays 16:30-18:00 (Years 9-11)
Wednesdays 12:15-13:45 (Years 7-8)

Language of Instruction: French / English

Location: STEM Centre

Maximum Number of Students: 12

Price: 690 CHF (incl. material)

Comment faire de la création artistique originale avec du matériel de récupération trouvé dans les rues de Genève et les déchetteries ? Nous savons aujourd'hui que nos habitudes de surconsommation, gaspillage excessif ainsi que l'obsolescence programmée nuisent gravement à l'environnement. Pourquoi jette-t-on tellement de beaux objets, construits souvent avec des matériaux nobles et au design esthétique et raffiné ? L'objectif de cet atelier est à la fois d'initier les élèves à la création artistique, stimuler leur créativité et les sensibiliser sur des sujets primordiaux tels que la récupération, le recyclage, le gaspillage, nos habitudes de consommation (ex : ralentir la course effrénée après le dernier modèle...). La démarche artistique proposée permet également de donner une deuxième vie à des objets qui ont eu une fonction spécifique et qui ont un vécu et une histoire (souvent inconnue). Et cette deuxième vie ne se heurtera jamais à l'obsolescence programmée.



SECONDARY SCHOOL

CREATIVE MEDIA & COMPUTING

Years 9-12

Course Instructor: Alex Ornat

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Tuesdays 15:45-17:15

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 12

Price: 750 CHF

Redefine the process of creation by experiencing it like never before! Use industry-leading hardware and software to create interactive data visualizations, learn advanced photo and video editing techniques, design and render products in 3D, and prototype electronic circuits that digitally interpret the world around us. Participants will develop transferable, practical skills in personalized contexts and themes that they can be passionate about.



CREATIVE PHOTOGRAPHY

Years 10-13

Course Instructor: Tomek Gola

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Thursdays 16:30-18:00

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 12

Price: 850 CHF

From shutter release to post-processing, students will cover the whole process from taking a great photograph to editing it for publishing in different media. From simple snaps to sophisticated photographs, thanks to amenities that STEM provides, students will discover the concepts of creative photography. Finally, from idea to social implications, students will learn about history of photography, its influence on real life in order to incorporate engaging thinking in their projects.



DIY DRONES

Years 9-12

Course Instructor: Maxime Miraillet

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Fridays 15:45-17:15

Language of Instruction:

English / French

Location: STEM Centre

Maximum Number of Students: 8

Price: 950 CHF (incl. drone)

Learn how to build, program and fly your own drone! Throughout the course, students will learn how drones are efficiently used in the world today, how to build a drone from a construction kit, how to 3D print special parts needed for customization, how to program, and how to fly the drone using remote controls, flight planning strategies as well as visualization.



DJING AND DIGITAL MUSIC

Years 9-13

Course Instructor: Joachim Soufflet

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Wednesdays 15:45-16:30 or 16:30-18:00

Language of Instruction:

English / French

Location: STEM Centre

Maximum Number of Students: 10

Price: 850 CHF

Discover and learn about DJing (techniques, skills and basic knowledge) and learn about mixing and producing digital music. Students will have the opportunity to develop their own musical style, and will familiarise themselves with a wide range of music genres, including, but not limited to: disco, hip hop, soul, house & dance music. Turntables, mixers & mixing software (Traktor, DJAY pro), drum machines, synthesisers and groove boxes will be presented and available for students to explore.



FASHION DESIGN & SEWING

Years 9-13

Course Instructor: Sonia Castejon

Timing: 9 September 2019
to 12 June 2020, Weekly for 2h00m
Mondays 16:00-18:00

Language of Instruction:

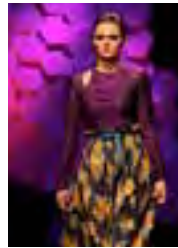
English / Spanish

Location: STEM Centre

Maximum Number of Students: 12

Price: 750 CHF

Students will be engaged in fun fabrics, theatre production and fashion show projects while learning the basics of hand and machine sewing. Products, focused on fashion design, could include connected clothes, sustainable clothes designs, various props, hats, bags, or whatever the students' imagination will innovate.



PROGRAMMING LANGUAGES MADE EASY

Years 9-12

Course Instructor: Alex Ornat

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Wednesdays 15:45-17:15

Language of Instruction: English

Location: STEM Centre

Maximum Number of Students: 15

Price: 750 CHF

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alert («Hello, world!»);
```

Whether the programming language has been around for ages like Java and C++, growing in demand like Python and JavaScript, or new and upcoming like Go and Kotlin, learn to program it here! Syntax, techniques, and advanced programming concepts are made easy in this project-based workshop where participants develop software, games, web apps, and more in many of the world's leading programming languages.



ROBOTICS

Years 9-12

Course Instructor: Maxime Miraillet

Timing: 9 September 2019
to 12 June 2020, Weekly for 1h30m
Wednesdays 15:00-16:30

Language of Instruction: English / French

Location: STEM Centre

Maximum Number of Students: 8

Price: 950 CHF (incl. robot)

Students will be engaged in fun fabrics, theatre production and fashion show projects while learning the basics of hand and machine sewing. Products, focused on fashion design, could include connected clothes, various props, hats, bags, or whatever the students' imagination will innovate.



WORKSHOPS IN COLLABORATION WITH BRICKS 4 KIDZ

PRIMARY SCHOOL (YEARS 1-2)



BRICKS 4 KIDZ® - DUPLO® WORKSHOP

Years 1-2

Course Instructor:

Amandine Urbani & Monica Mories

Timing: Wednesday 15 January 2020,
13:30 -16:30 (total of 3 hours)

Language of Instruction:

English / French

Location: STEM Centre

Maximum Number of Students: 14

Price: 75 CHF

Bricks 4 Kidz® DUPLO® workshops use DUPLO® bricks to deliver a high quality of educational play. During this workshop children's eyes will light up as they dig into a pile of brightly-coloured DUPLO® bricks! Through engaging and interactive discussion, children will learn more about their environment and the world around them. They will build models based on a variety of themes including everything from animals and insects, to transport and the human body! All our models are exclusive and designed by Bricks 4 Kidz® model designers. At the end of the workshop, students will take home a worksheet summarizing what they have learnt and what models they have built.

The objectives for the course are to learn and practice the following: letter recognition, patterning, learning colours, counting, fine and gross-motor skills, position and ordering, vocabulary, comparing and contrasting.

PRIMARY SCHOOL (YEARS 3-4)



BRICKS 4 KIDZ® - DUPLO® WORKSHOP

Years 3-4

Course Instructor: Vanessa Vidal or other

Timing: Wednesday 22 January 2020,
13:30 -16:30 (total of 3 hours)

Language of Instruction:

English / French

Location: STEM Centre

Maximum Number of Students: 14

Price: 75 CHF

Bricks 4 Kidz® - LEGO® Technic workshops use LEGO® bricks to deliver a high quality of educational play. From forces of Nature to Life sciences, from Energy to Space, we will lead lively discussions whilst exploring science, technology, engineering and mathematics (S.T.E.M.) concepts. Working in pairs, children will experience the hands-on fun of model building, from concept to completion. All our models are exclusive and designed by Bricks 4 Kidz® model designers. At the end of the workshop, students will take home a worksheet summarizing what they have learnt and what models they have built.

The objectives for the course are to: reinforce S.T.E.M. concepts, help develop an appreciation for how things work, build self-confidence and problem solving skills, foster teamwork, trigger children's lively imaginations, provide a safe, enriching place to create and play.



4. ENRICHMENT ULP CLUBS

Enrichment clubs are part of our Years 9 to 11 Universal Learning Program (ULP) and our Years 12 & 13 IB DP CAS (Creativity, Activity, Service) program. These clubs are generally led by students for students, thus are free of charge. Timings for some clubs are still to be determined; therefore these will be published the week of September 9, , 2019 (STEM Discovery Week). Registrations are done using ManageBac (within the "Groups" section) for secondary school students and using a registration form for middle school students.

MIDDLE SCHOOL

SCRATCH PROGRAMMING

Years 5-6

Lead by: Bruce Mauger & Jacob Mansfield
(bruce.mauger@learning.ecolint.ch)

Timing: TBC

Location: STEM Centre

Students will learn basic SCRATCH programming while creating games and engaging in other fun activities.



SECONDARY SCHOOL

CLIMATE DETECTIVES SCHOOL PROJECT

Years 6-10

Lead by: CAS Student Needed

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: TBC

Location: STEM Centre

Students are challenged to 'make a difference' in understanding and protecting Earth's climate. They will identify a climate problem by observing their local environment and be tasked to investigate it as 'Climate Detectives'. To this end, they will use available Earth Observation data or take measurements on the ground. Based on their investigation, teams will propose a way to help reduce the problem. The students will learn about climate on Earth as a complex and changing system and the importance of respecting our environment. The project aims at developing and reinforcing the students' STEM skills and at stimulating their creativity, critical thinking and initiative to improve their understanding of climate issues and positively changing behaviours that can have an influence on such issues.

Source: ESA. (2018). The Climate Detectives School Project. Retrieved from https://www.esa.int/Education/Climate_detectives/The_Climate_Detectives_school_project



COSTUME MAKING FOR PRODUCTIONS – IN COLLABORATION WITH PERFORMING ARTS

Years 9-13

Lead by: Sonia Castejon
(sonia.castejon@ecolint.ch)

Timing: Mondays open from 15:45 to 18:00

Location: STEM Centre

Students will be working together with a professional seamstress to help create props and costumes, designed by the Performing Arts department, for the upcoming school productions in the Centre des arts such as Cinderella.



DIY / PASSION PROJECT SUPPORT

Years 9-11

Lead by: Maxime Miraillet
(maxime.miraillet@ecolint.ch)

Timing: Tuesdays 15:45-16:30

Location: STEM Centre

Students are offered support for any DIY projects they are interested in designing, creating or building. Students must come to the sessions with a theme, an idea or plan for their projects so that it can be enhanced with STEM aspects. Students should be ready to work collaboratively, but also independently.



ECO COMMITTEE

Years 9-13

Lead by: Finnur Ricart Andrason
(finnur.ricart@learning.ecolint.ch)

Supervisor: Stéphanie Rathier
(stephanie.rathier@ecolint.ch)

Timing: Wednesdays 10:30 (bi-weekly)

Location: STEM Centre

The eco committee is a group of students, staff and parents whose goals are:

1. To raise awareness of the impact of the individual and community on the environment.
2. To take action within the community to reduce the overall impact on the environment.
3. To involve as many members of the community as possible in achieving goals 1. and 2.

We are working with the organization *J'aime ma Planète* in the aim of obtaining the Eco-School certificate



FILM CLUB

Years 10-13

Lead by: Sofia Hernandez and Soumya Agarwal
(sofia.hernandez@learning.ecolint.ch, soumya.agarwal@learning.ecolint.ch)

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Thursdays 16:30

Location: STEM Centre

The club's main objective is to pay homage to the seventh art by first discussing filmmakers, movies and techniques. Following this, as a team, participants will be making short films inspired by such movies throughout the year. The club will focus on creating a community around movies and on the process of making them as a way of telling stories. The members will all be able to bring their ideas, skills, and interests to the table, as filmmaking is a collaborative process. Essentially, this club was created as an effort to spread the love of film and discover how it all works collectively.



FIRST LEGO LEAGUE WITH EV3 MINDSTORMS

Years 5-10

Led by: Junseo Um
(junseo.um@learning.ecolint.ch)

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Thursdays 15:45 or 16:30

Location: STEM Centre

Cost: 100 CHF (to buy needed LEGO boxes & cover competition fees)

“Project-based, hands-on *FIRST* programs introduce students to coding, programming, and engineering in an inclusive, creative, and hopeful environment where students work collaboratively to solve a yearly robotics challenge” (FIRST, 2019). This year’s theme is City Shaper. The challenge is comprised of three parts: the Robot Game, the Project, and the Core Values.



LGB TECH CREW

Years 9-12

Lead by: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Fridays 10:30

Location: STEM Centre

The LGB Tech Crew is formed of members that have expertise in ICT and who are willing to share their digital knowledge with peers and teachers. The competences needed by members of this group are: ability to create, communicate information effectively, evaluate and use digital tools, plan & manage activities to develop digital solutions, troubleshoot systems and applications, and organize events.



MAXWELL'S DEMON PHYSICS CLUB

Years 10-13

Lead by /Supervisor:

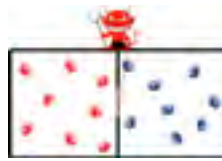
Qingyang Zhang
(qingyang.zhang@learning.ecolint.ch)

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Tuesdays 16:30

Location: STEM Centre

Using our knowledge of physics, the physics club will develop a project to enter the Swiss Young Physicists' Tournament in March. Come along to improve your critical thinking, problem-solving and collaboration skills.



Science ABC. (2019).
What is Maxwell's Demon?
Retrieved from <https://www.scienceabc.com/nature/universe/what-is-maxwells-demon.html>

MEDICAL SOCIETY

Years 11-13

Lead by: Thessabel Chang & Alia Maftei
(thessabel.chang@learning.ecolint.ch,
alia.maftei@learning.ecolint.ch)

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Thursdays 10:30

Location: STEM Centre

Do you love science? Do you imagine studying something medical at university? Then join the LGB Medical Society! We will be meeting once a week in order to organize fundraisers, discuss medical topics, prepare for university tests like the BMAT or UKAT, listen to guest speakers and much more!



“MYTHS & LEGENDS” FASHION SHOW TEAM

Years 9-13

Lead by: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Wednesdays 10:30;
Thursday 19 March is show time!

Location: STEM Centre

The STEM Centre’s “Myths & Legends” Fashion Show will be the community event of the year. As such, we are seeking the help of students, teachers, and parents to form teams that will help with planning, logistics and execution of the show. If you are interested in entrepreneurship, marketing, event planning, fashion, photography, technology, prop making, sewing, electronics, music, or other, please join us to ensure the success of this extraordinary event.



PHILOSOPHY CLUB

Years 11-13

Lead by: Toril Palaniappan
(toril.palaniappan@learning.ecolint.ch)

Supervisor: Conrad Hughes
(conrad.hughes@ecolint.ch)

Timing: Thursdays 10:30

Location: STEM Centre

Philosophy Club is a time during which students are given the opportunity to take part in philosophical dialogue. Through the discussion of philosophers, theories, ideas, quotes, and real-life or hypothetical situations, students are given the chance to engage with one another in a way which they wouldn’t in other classes. There is no requirement for prior knowledge in philosophy or philosophers, only a general interest and motivation to expand on knowledge and develop critical thinking. Discussions are stimulating, mature and allow students to develop their thinking and use their knowledge in ways which allow other students to grow and respond in their own manner.

ROCKETRY CLUB

Years 11-13

Lead by:

Loïc Zammit
(loic.zammit@learning.ecolint.ch)

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Fridays 16:30

Location: STEM Centre

In rocketry club, we design, build and launch rockets. In doing so, we use the associated fields of physics, mathematics, chemistry and engineering. The rockets we build will be of increasing complexity and power. Our goal is to learn more about rocketry, and launch our rockets using official rules and regulations of Switzerland.



WEB DEVELOPMENT & DESIGN

Years 11-13

Lead by:

Loïc Zammit
(loic.zammit@learning.ecolint.ch)

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: Tuesdays 15:45

Location: STEM Centre

Students in this club will learn and discuss aspects of web development and design. They will use HTML, CSS and JavaScript to make websites and will then build a server app in Node.JS to run them. This club will allow students to build their own or collaborative websites for practice or for a formal purpose.



WORLD SUMMIT ON INFORMATION SOCIETY (WSIS FORUM) 2020 YOUTH TRACK

Years 7-13

Lead by: CAS Student Needed

Supervisor: Marie-France Labelle
(marie-france.labelle@ecolint.ch)

Timing: 30 March to 3 April – see separate

Location: STEM Centre

WSIS aims to include youth perspectives and engage young people in discussions about how technology can provide opportunities to address some of the world's most pressing issues and provides a platform where youth can offer their insights and understanding of the information society, its challenges and opportunities, and where they can raise questions but also propose solutions to harvesting the power of ICTs towards equally distributed social impact. Students will be able to participate in various activities for all ages such as: Hackathon, WSIS Experience, Exhibition, Tech Labs Workshops, and Youth Café.



5. EDUCATIONAL STEM CAMPUS PROJECTS

Educational projects are experiential teaching and learning opportunities we offer our students from all three schools on the LGB campus. By linking various school programs and curricular topics to real-life initiatives in the Geneva area, we aim to help to create awareness and find solutions to global issues while using STEM skills. Thus, it is our pleasure to work collaboratively with external organisations who are fully active in trying to save our planet's resources and who are ground-breaking in the fields of STEM.

SUSTAINABILITY PROJECT

LAC LÉMAN CLEAN-UP PROJECT

“Litter on land enters our watershed, some of it gets washed out to the ocean the rest stays in our rivers and lakes entering our food chain and killing our natural environment. When we integrate data collection with pollution mitigation we can leave the environment clean today and provide data for the solutions of the future.” (Hammerdirt, 2016)

La Grande Boissière students will have the chance to help create awareness of our need to protect the environment and to learn about the use of scientific data for community action. The main goal will be to “increase the value of citizen’s observations and actions when conducting volunteer litter removal operations.” (Erismann)

The pedagogical project will be comprised of two major components which will be interwoven with the curriculum and other programs such as CAS.

1. **Litter surveillance and Data Management:** includes beach clean-ups (week of October 2) and data collection, web scraping, data integrations (scripts for comparable data), reporting to local officials, web app design
2. **Development of IOT monitor for water quality:** includes prototyping, building and programming.



GENEVA SDG SOLUTION SPACE PROJECT

The Geneva SDG Solution Space is a new maker space lab where students, researchers, humanitarian workers and UN experts gather to provide practical answers to the challenges of sustainable development. The focus is on the seventeen Sustainable Development Goals (SDG) set by the United Nations in 2015. The facility is housed in the Biotech Innovation Park Campus (UNIGE).

From September, enthusiastic LGB Secondary School students will be able to generate and present their ideas for solutions to the SDG Solution Space committee who will select up to 10 STEM innovators. With the help of international experts in STEM (and in collaboration with Tsinghua university in China), the chosen students will learn and use state-of-the-art digital technology in the lab to help them develop prototypes, validate projects and, more broadly, test the suitability of their ideas. The final products will be presented at the University of Geneva, the STEM Centre and at the Open Geneva Innovation Festival.



ECOLE À LA FERME - LIFE CYCLES

“L'école à la ferme” is a place for creative and practical sustainable education, teamwork and successful collaboration. The farm is accessible and adapted to all children which places the reality of life at the center of its activities, mostly the importance of the links between man, nature and the environment. On the farm, all school subjects are put into practice: french, calculus, natural sciences, geography, botany, chemistry ... And the students have all their senses awake: touch, smell, sight, hearing and taste, not to mention the mind and the heart. Objectives and themes for the visit are set by the teachers with the support of the family on the farm. The evaluation of the objectives after the visit is part of the program because “l'école à la ferme” also means: mutual learning, exchanges, experiences and discoveries. students.



ENGAGING FOR ACTION CAMPUS PROJECT

This academic year, students on campus will be asked to think about how they can contribute solutions towards reaching the United Nations' sustainable development goals (SDGs). To help students empathize with global issues, teachers will lead discussions on the impact of actions taken in our everyday lives. To help students generate ideas to create solutions and build prototypes, teachers will guide them through the design cycle process. This sustainability project will be comprised of four phases:

- i) an official launch in November 2019,
- ii) the teaching and learning of concepts and discussions on existing projects linked to SDGs throughout the academic year
- iii) the building of a prototype using the design cycle and STEM skills, and
- iv) an exhibition during the week celebrating Earth Day in April.

Other events and activities across campus will support this initiative such as the *ESA Climate Detectives School Project* and *Lac Léman Beach Cleanup* just to name a few.



HYDROPONIC GARDEN

We will continue to use seeds from the ESP seed library to harvest herbs, lettuce and other in the STEM Centre's hydroponic garden; where growing conditions are controlled electronically.



SEED LIBRARY

(IN COLLABORATION WITH THE SECONDARY SCHOOL LIBRARY)

A Seed Library is a depository in which members of Ecolint Community can share seeds from plants grown without the use of any pesticides or synthetic chemical fertilizers for their garden.

Our goal is to contribute to the preservation of non-marketed varieties of plants and to encourage gardening. In doing so, the Seed Library will also foster a culture of exchange within the community and give opportunities to initiate important discussions on biodiversity, fight for food and intellectual property.

SENSIBILISATION A LA GESTION DES DÉCHETS & LES DÉCHETS EN MILIEU AQUATIQUE

(SEMAINE DU 20 AVRIL)

(EN COLLABORATION AVEC COSEDEC ET LE CÈDRE)

«Sensibilisation à la gestion des déchets et à la consommation responsable COSEDEC invite les élèves à adopter une position responsable vis-à-vis de leurs déchets. Ce vaste thème permet aux enseignants et aux animateurs d'ouvrir la réflexion sur de nombreuses questions: enjeux du recyclage, préservation des ressources naturelles, pollution, réflexion à l'achat. L'approche proposée se situe dans une perspective positive de changement qui permet de comprendre l'impact de son comportement sur l'environnement et la société.» (Cosedec)

En discutant la problématique des pollutions des eaux, plus particulièrement les effets de la pollution pétrolières en milieu marin de type Erika, Prestige ou Amoco Cadiz, les élèves auront la chance d'utiliser les ressources du CEDRE, soit des expériences proposées (ex. la marée noire), son catalogue de ressources en ligne, ou ses orateurs.



ASTRONOMIE À L'ÉCOLE

(EN COLLABORATION AVEC RANDONNÉES & ASTRONOMIE)
(26 SEPTEMBRE, 2019)

L'observatoire vient à l'école ! Les élèves auront la chance d'apprendre plusieurs notions liées à l'astronomie. Un planétarium 3D itinérant ou numérique est l'élément principal des animations pédagogiques mais plusieurs autres activités sont proposées. Les élèves de l'école primaire feront la découverte de l'Univers, tandis que pour les élèves des écoles moyenne et secondaire, l'observation et l'expérimentation en «réel» vont prendre une place importante. Ainsi, l'astronomie avec tous ses concepts devient un moyen d'explorer des méthodes qui pourront s'appliquer aux d'autres disciplines.

3D PROSTHETICS MODELING PROJECT



This academic year, students can get involved with this new hands-on real life experience project! Through research, design, and development of 3D model prosthetic hands, students will support a specific child by fitting him with a new hand. In collaboration with the child, students will modelise and build 3D printed prototypes so that his dream can come true!

BUILDING A HUMANOID PROJECT



This project started in January 2017 by our ESP students across campus. Our students are collaboratively building a life-size humanoid. They are learning and applying various STEM skills and scientific concepts. Join us in the STEM Centre to help build a body part or program his artificial intelligence!

STRUCTURES GÉANTES KAPLAS

(SEMAINE DU 10 FÉVRIER, 2020)



Les élèves de l'école primaire assisteront à des ateliers ludiques de constructions géantes avec des planchettes de bois KAPLA. Le but des sessions encadrées par des animateurs experts en KAPLA est de repousser les limites de la construction et de l'architecture par le jeu coopératif, ludique et pédagogique.

SOUTH ASIA SCIENCE EDUCATION PROGRAM (SASEP) – INTERNATIONAL COOPERATION PD PROJECT

**(IN COLLABORATION WITH CERN AND LIFE LAB FOUNDATION)
(13 TO 17 APRIL, 2020)**



On April 22 to 26, 2019, Life Lab Foundation, in collaboration with Ecolint's STEM Centre and CERN, organized the first-ever South Asia Science Education Programme (SASEP), in New Delhi, for 82 teachers from India and its neighboring countries including Bhutan, Sri Lanka and Afghanistan. The five-day event was held at Shiv Nadar School, Noida, and included a reception for all at the Swiss Embassy in the city. The training empowered teachers with 21st century knowledge and skills in interdisciplinary STEM fields.

Modules included themes such as Concept-Based Teaching and Learning; Principles of Learning and Integrating STEM Education Pedagogy; STEM Project-Based Learning; Education through the Arts, Movement and Mindfulness; Teaching and Learning for Inclusion; Service Learning; and Elementary Particle Physics in Early Physics Education. For more information, visit <https://indico.cern.ch/event/803074/overview> or <https://www.linkedin.com/company/life-lab-education-and-research-foundation/>.

The team of six international trainers was led by Marie-France Labelle, the STEM Director at the International School of Geneva and Jeff Wiener, a staff scientist managing CERN's national and international teacher training programmes. Other trainers included Stephen Burke (Physics), Amanda Linden (Theatre), Estefania Medina Martinez (Learning Support), and Maxime Miraillet (Robotics).

In 2020, the team will continue the project in Bhutan!

SPEAKERS-WORKSHOP LEADERS

- **Marie-Claude Blatter**, biochimiste au SIB Institut Suisse de Bioinformatique (<https://www.sib.swiss>) propose un atelier sur la «découverte de la médecine de précision» pour les classes 12 de biologie. (Décembre, 2019).



Les avancées fulgurantes des technologies qui ont accompagné le séquençage du génome humain sont à la base d'une nouvelle médecine dite de précision. La médecine de précision (aussi appelée médecine personnalisée) est venue compléter les approches de la médecine plus traditionnelle, en particulier dans le domaine du traitement du cancer : une analyse génétique

de la tumeur permet de poser un diagnostic précis et de choisir un traitement qui sera spécifique. Qu'est-ce qu'un cancer ? Pourquoi une cellule devient-elle cancéreuse ? A quoi sert l'analyse génétique ? Les étudiants pourront répondre à ces questions grâce à une activité qui permet de mieux comprendre les différentes étapes de la prise en charge des patients. (1) Analyse de l'ADN de la tumeur du patient - trouver les mutations (2) Comprendre l'impact de la mutation sur la structure 3D et la fonction de la protéine (3) Comprendre le lien entre la structure 3D de la protéine et le choix du médicament. Cet atelier est basé sur un exemple concret : le traitement du mélanome des patients qui ont la mutation BRAF V600E. Pour plus d'information, consultez le site web (<http://www.atelier-drug-design.ch/braf.php>) et les vidéos (<https://www.santeperso.ch/Projets/Histoires-de-medecine-personnalisee>).

- **James Grimes**, Mathematician, will present and conduct a workshop on Enigma and the Secret World of Codes and Code Breaking for Year 10 classes of Mathematics. (October 2019)
- **Nicoletta Iocobacci**, Webster University Professor for Emerging Media, Augmented/Virtual/Mixed Reality Storytelling, Transmedia, Personal Branding will present exponential ethics to various audiences.
- **Jamaal Jackson Rogers**, award-winning Canadian spoken word poet and international arts educator, and Randy Kelly, internationally award-winning film and television director, editor and cameraman, will conduct the famous 3,2,1 Speak! - Word and Cine Poetry workshop for Year 9. (December 2019, or June 2020)
- **CERN, EPFL, UNIGE** and other institutions engineers and scientists as well as admissions officers from various well-known universities such as Oxford University will conduct presentations, classes and/or workshops with our students.

It is possible that the STEM Centre hosts speakers not named above should opportunities arise.

RULES & REGISTRATION

((EXTRA-CURRICULAR ACTIVITIES (ECA) / WORKSHOPS / TRIPS))

The following pages are to be read in conjunction with the “General & Financial Conditions 2019-2020” document of the International School of Geneva.

FEES

Please refer to the fees indicated for each activity. In general, ECAs, run by professionals, have associated fees. Clubs, run by students, are free.

REGISTRATION

Registration is necessary before a child can be admitted to an ECA or a workshop. Registration is accepted online via the Ecolint ECA app (<https://eca.ecolint.ch>). At times, Google forms may be used to gauge interest. Availability is subject to capacity and is granted on a first-come-first-served basis. Information on the ECA programme features in the school’s website.

Registration is for the full school year, i.e. September to June, unless otherwise indicated (e.g. workshops), and are pro rata for late registrations. Late registrations are possible but subject to the availability of places in the activities and with the teacher’s agreement.

GENERAL CONDITIONS

The financial commitment is for the full school year, i.e. September to June, unless otherwise indicated (i.e. workshops or trips where deposits may be required). No reduction in fees will be made by the school in case of cancellation or non-respect of the contract, or in case of any absences, withdrawal or dismissal of the student. Exception will be made for student relocation, in which 3 months written notice should be given to the STEM Director before the start of the next term.

To maintain children in a safe environment at school, students require adult supervision at all times. In the case of an Early Years or Primary student, if a parent or guardian has not arrived by the end of the session (a 10 minute grace period applies), the student will be taken to the After School Care (ASC) and parents billed accordingly.

Lessons missed by students are not replaced and will be billed.

The school reserves the right to cancel an activity in case of insufficient registration, conflicts with other activities or logistic problems.

Activities take place both on and off the campus. By registering in these activities, parents thereby authorise their child to take part in said trips. The school reserves the right to change schedules, or venues. There are no ECA during school holidays.

CODE OF CONDUCT

The school’s Code of Conduct, as found in the Parent and Student Handbook, represents the central values of the school and is based on the belief that one of the school’s main aims is to support the development of decent, respectful and caring citizens of the world.

All members of the community are expected to treat each other with respect. Students are expected to follow instructions given by adults regardless of their role. The teachers and other adults in the school will treat the students with respect.

A student who does not conform to the Code of Conduct risks being asked to leave the programme permanently.

INFORMATION

BOOKING

If you wish to book all or a specific space in the STEM Centre, please email the STEM Centre Director to check availability and conditions (see CONTACTS).

The Foundation charges a fee of 100 CHF/hour to rent space in the STEM Centre on weekends. Additional security fees apply if the timing of the event is outside of school hours. Events organized by the STEM Centre have priority for the use of the space on weekends.

The STEM Centre reserves the right to organize events during holidays, but in general, it is closed during holidays.

SCHEDULE

The STEM Centre's opening hours are adapted to the activities taking place there, thus, it may be closed at other times. Please refer to the schedule for each event or activity. For your information, the campus of La Grande Boissière is open from Monday to Friday from 7:30-20:00 and Saturday from 13:00-18:00.

ACCESS

The STEM Centre is ideally located on La Grande Boissière campus, between the Route de Chêne, a two minute walk from the Grange-Canal TPG 12 tram stop, and the Route de Malagnou, Rieu bus stop TPG 5, 25, 61 via the Promenade Charles-Martin and the Petite-Boissière road. The campus has 200 parking spaces available for evening events. We recommend you use public transport for day events.

CONTACTS

- **STEM CENTRE**

Fondation de l'École Internationale de Genève
62, route de Chêne
CH-1208 Genève
+41 22 787 2548

STEM Centre Director: Marie-France LABELLE (marie-france.labelle@ecolint.ch)

- **CENTRE DES ARTS**

Fondation de l'École Internationale de Genève
62, route de Chêne
CH-1208 Genève
+41 22 787 26 75
www.centredesarts.ch

Centre des arts Director: Isabelle MULLER (isabelle.muller@ecolint.ch)

Assistance: zara.preece@ecolint.ch or tao.nobel@ecolint.ch

Centre des arts: centredesarts@ecolint.ch

- **EXTRA-CURRICULAR ACTIVITIES - LGB**

ECA Coordinator and Sports Director:

Patrick MACAZAGA (patrick.macazaga@ecolint.ch)

Assistance: cecile.byrne@ecolint.ch

- **DEVELOPMENT OFFICE - FOR GIFTS AND DONATIONS**

Our school is a not-for-profit foundation which is entirely financed by school fees. We solicit our school community to help us bring about essential projects and improvements, as enhancing each aspect of our provision is one of our priorities.

Development Associate: Brian WAHLEN (brian.wahlen@ecolint.ch)

Fondation de l'École Internationale de Genève
62, route de Chêne
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www.ecolint.ch/overview/supporting-ecolint

STEM PROGRAMME

The STEM Program offers secondary school students the opportunity to develop 21st Century competences such as inquiry, research, critical thinking, problem solving, self-discipline, collaboration and global awareness. Throughout the course, students are given design problems and inquiry questions that focus on global issues. Using the design cycle to guide them, students are asked to empathize with the challenge, research, develop their ideas and build creative and innovative solutions or products. They gain new skills in 3D printing, laser cutting, programming, robotics, electronics and more. At the end of the course, students present and evaluate their products during the Annual STEM Centre Exhibition and/or other events on campus or Geneva. For each project, students need to submit a design folder, as an e-portfolio, which contains evidence of all the work undertaken. This e-portfolio is graded using specific criteria: Inquiry and Analysis, Development of Ideas, Creating the Solution, and Evaluation.

WE ARE LOOKING FOR STEM AMBASSADORS!

If you are part of our Ecolint community and are passionate about science, technology, engineering and mathematics (STEM), we need you! We are looking for volunteers to offer their time and enthusiasm to help bring STEM subjects to life and demonstrate their value in life and careers. STEM Ambassadors, students, engineers, designers, architects, scientists, technicians, or other will have an important role in engaging with students in and outside of the classroom in order to bring new inspiring perspective to STEM and career opportunities.



STEM Centre

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