



Enhancing STEM practice and strategy in secondary schools

--- STEM Training Programme ---

23-27 April 2019, Future Classroom Lab, Brussels

DESCRIPTION

The course provides teachers in secondary schools with resources and ideas to help them bring effective and quality teaching of STEM disciplines (Science, Technology, Engineering and Mathematics) in their classrooms, while developing and applying innovative teaching approaches to increase young students' knowledge, skills and interest in STEM. The course includes hands-on workshops (e.g. coding) and active exploring of online resources such as virtual labs and research centers or space related activities, among other ingenious tools. The teachers have the opportunity to exchange knowledge while being introduced to different creative teaching approaches and practices, to be used both in STEM and in cross-curricula capacity, in the classroom. The course will also look into why it is important to develop a STEM strategy at the whole-school level and how to do that in practice. The course is co-organized by Future Classroom Lab, Next-Lab, TIWI, STEM School Label and Scientix, the community for Science education in Europe.

Day 1 – Tuesday 23 April	
09:00 – 09:30	Arrival and registration
09:30 – 10:00 (30')	Welcome and course introduction Practicalities; Course agenda; Ice-breaking activity
10:00 – 10:20	What is a STEM School
10:20 – 10:30 (10')	School leadership and culture / Inclusive culture Group work: Working on your STEM school strategy (introduction)
10:30 – 10:45	Coffee break
10:45 – 12:15 (90') / ws1	School infrastructure / Access to technology and equipment Future Classroom Lab tour: Exploring the lab
12:15 – 13:00	Lunch
13:00 – 14:30 (90') / ws2	School infrastructure / High quality instruction classroom materials Scientix: resources from EU projects

14:30 – 15:00	Coffee break
15:00 – 16:30 (90') / ws3	Instruction / Inquiry Based Science Education (IBSE) Inquiry learning and use of online laboratories with Go-Lab
16:30	End of the day at the lab
19:30	Networking dinner: Assessment in STEM education (offered by Scientix)

Day 2 – Wednesday 24 April

09:00 – 10:30 (90') / ws4	Curriculum implementation / Contextualization of STEM teaching Introducing Bio economy in STEM Classes
10:30 – 10:45	Coffee break
10:45 – 12:15 (90') / ws5	Curriculum implementation / Interdisciplinary instruction (within STEM) Scientix: Interdisciplinary learning & Interdisciplinary project based ideas
12:15 – 13:00	Lunch
13:00 – 14:30 (90') / ws6	Instruction / Problem based learning Coding in education
14:30 – 15:00	Coffee break
15:00 – 16:30 (90') / ws7	Instruction / Project based learning 3D printing and designing techniques with Open Source Tools for secondary education teachers
16:30	End of the day at the lab
	Social/cultural activity: Interactive city walk

Day 3 – Thursday 25 April

08:30 – 13:30	Study visit to a local school (including lunch)
13:45 – 14:30 (45') / ws8	Professionalization of staff / Highly qualified professionals Exploring STEM Careers: Space, ICT and others
14:30 – 15:00	Coffee break
15:00 – 15:45 (45') / ws9	Connections / With universities and/or research centres Connecting schools with the world of research!
15:45 – 16:30 (45') / ws10	School leadership and culture / School leadership Introduction to School Shared Leadership
16:30	End of the day at the lab
16:30 – 18:00	Suggested social/cultural activity: Museum visit to Parlamentarium

Day 4 – Friday 26 April

09:00 – 09:30	Arrival and registration for weekend participants	
09:30 – 10:30 (60') / ws11	Professionalization of staff / Professional development SOS-ACT and the European Schoolnet Academy (and welcome of the 2-day participants)	
10:30 – 10:45	Coffee break	
	5-days participants	2-days participants
10:45 – 12:15 (90') / ws12	Curriculum implementation / Interdisciplinary instruction (within STE(A)M) Europeana – integrating cultural heritage in STEM classes	School infrastructure / Access to technology and equipment The Future Classroom Lab
		Instruction / Problem based learning Coding in education
12:15 – 13:00	Lunch	
13:00 – 14:30 (90') / ws13	<ul style="list-style-type: none"> • Connections / With parents guardians & local communities • School leadership and culture / High Level of cooperation among staff Scientix – The STEM Discovery Week	Instruction / Inquiry Based Science Education (IBSE) Inquiry learning and use of online laboratories with Go-Lab
		Connections / With industry School-industry collaboration: Why & how to get started!
14:30 – 15:00	Coffee break	
15:00 – 16:30 (90') / ws14	Connections / With other schools and/or educational platform eTwinning	School infrastructure / High quality instruction classroom materials Scientix: resources from EU projects
		<ul style="list-style-type: none"> • Connections / With parents guardians & local communities • School leadership and culture / High Level of cooperation among staff The STEM Discovery Week
16:30	End of the day at the lab	
19:30	Networking dinner: Personalisation of learning	

Day 5 – Saturday 27 April		
	5-days participants	2-days participants
09:00 – 10:30 (90') / ws15	Connections / With industry School-industry collaboration: Why & how to get started!	Curriculum implementation / Contextualization of STEM teaching Introducing Bio-economy in STEM Classes
		Curriculum implementation / Interdisciplinary instruction (within STE(A)M) Europeana – integrating cultural heritage in STEM classes
10:30 – 10:45	Coffee break	
10:45 – 12:15 (90') / ws16	School leadership and culture / Inclusive culture Group work: Working on your STEM school strategy	School leadership and culture / Inclusive culture Group work: Working on your STEM school strategy
12:15 – 13:00	Lunch	
13:00 – 14:30 (90')	Presenting the groups' school strategies	
14:30 – 15:00	Conclusions and impressions of the week; Certificates	
15:00	End of the course	

PARTICIPANTS

To be added

PRE-ACTIVITIES

To be added

PRACTICAL INFORMATION

How to arrive to Brussels

Brussels has two airports: Brussels National airport (Zaventem), about 30 min to the city centre, and Brussels South airport (Charleroi), about 60 min to the city centre. You can arrive conveniently to Brussels also by train from London (Eurostar), Paris, Amsterdam and Cologne (Thalys).

From the Brussels airport (Zaventem) to the centre:

- **BY TRAIN:** The train takes you to the main train stations in the Brussels city area: Gare du Nord, Gare Centrale, and Gare du Midi. The ticket costs 8.5€. The trains go every 15-20 min and leave from the Level -1 of the airport terminal:
www.brusselsairport.be/en/passngr/to_from_brussels_airport/train/
- **BY BUS:** The buses **Number 12** (Monday to Friday until 20h) and **Number 21** (weekends all day and weekdays after 20h) take you to Diamant, Schuman and Luxembourg. The ticket costs 4-6 Euros. You find the bus schedules here:
<http://www.stib.be/horaires-dienstregeling.html?!=en>

From the Charleroi airport to the centre:

- Take the Brussels City Shuttle bus that takes you to the Brussels Gare du Midi (main train station). A return ticket costs 28 euros (and a one-way ticket normally 14 euros).
- For the bus schedule, see here: www.charleroi-airport.com/en/passengers/acces-and-parking/brussels-city-shuttle/index.html
- At Gare du Midi you can continue your journey by using different metro lines, buses or pre-metro.

Course venue and how to arrive

The courses will be organised in Brussels, at European Schoolnet's Future Classroom Lab.

Address: European Schoolnet, Rue de Trèves 61 – 3rd floor, 1040 Brussels.

www.europeanschoolnet.org/

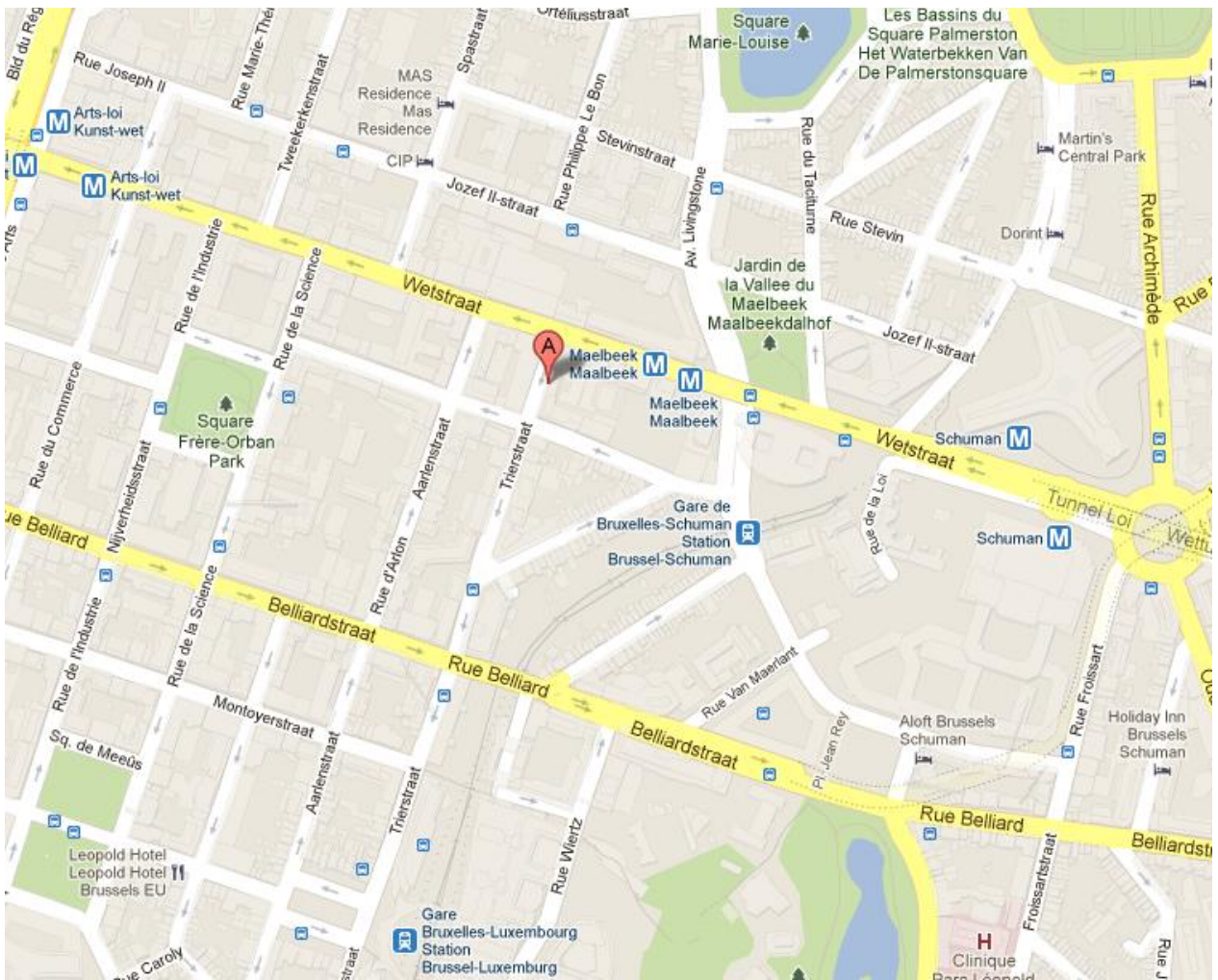
Future Classroom Lab - The Future Classroom Lab is a fully equipped, reconfigurable, teaching and learning space developed by European Schoolnet, its 30 supporting Ministries of Education and leading educational technology providers. Future Classroom Lab helps to visualise how conventional classrooms and other learning spaces can be reorganised to support changing styles of teaching and learning. Read more: <http://fcl.eun.org>

How to best reach the EUN office and Future Classroom Lab

The office is close to the following places:

- Schuman (buses, metro lines 5 & 1, train, airport bus): 10 min walk
- Luxembourg (buses, train, airport bus): 10 min walk
- Arts-Loi (metro lines 1, 2, 5, 6): 10 min walk

- Maelbeek (metro lines 5 & 1): 2 min walk – use the exit "Rue de la Loi/Wetstraat"
- Thon EU hotel: 1 min walk (across the street)



Be aware of pick-pockets whenever you are in public places, especially when using public transports.

About European Schoolnet

European Schoolnet is the network of 30 European Ministries of Education, based in Brussels. As a not-for-profit organisation, we aim to bring innovation in teaching and learning to our key stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners.

www.eun.org

- **Past courses:** check out our [previous workshops/courses](#).
- **Organisation details:** EUN Partnership aisbl (European Schoolnet / EUN), Rue de Trèves 61, 1040 Brussels, Belgium, PIC: 998415084.
- **Contact:** For any questions related to the course please contact Elina Jokisalo, elina.jokisalo@eun.org



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