

CIRCLE LAB: innovative learning approach for circular chemistry in secondary education

CIRCLE LAB

European Seminar

October 4th 2022

13.30 - 17.30



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Welcome

Welcome to the CIRCLE LAB European Seminar in Kaunas, This is a unique experience co -created by CIRCLE LAB secondary schools, academia and industrial partners. Join us in Kaunas or Online!

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CIRCLE LAB project

What is CIRCLE LAB?

CIRCLE-LAB, *innovative learning approach to circular chemistry in secondary education*, is aimed at supporting the initial and continuous professional development of teachers' profiles in accordance with the European lifelong learning approach through the application of practical and innovative tools in order to promote circular chemistry in secondary schools. The project will consider identified needs & gaps related to circular chemistry education and in particular:

- need for a practice-based approach that provides innovative resources and collaborative practices
- lack of promotion of circular economy principles and ESD core competencies within chemistry education.

- the necessity of promoting and developing digital learning environment.

The uneven implementation of ESD principles in chemistry education within the EU may depend by the national economy and other common European barriers (lack of visibility, dedicated training, support networks and uniformed regulation). CIRCLE-LAB transnational approach represents an added value for promoting a spirit of cooperation among partners where virtuous experiences of policies, projects, practices can be shared between countries with different level of ESD awareness, and for addressing these key challenges. Furthermore, the transnational approach is also necessary both for avoiding duplication and parallel initiatives in the different Members States and for enhancing the quality, the relevance and the overall impact of the project.

Consortium:

SE - Mälardalen University - coordinator

SE - Rudbeckianska gymnasiet

ES - Universidade da Coruña. Advanced Scientific Research Centre

IT - SC Sviluppo chimica S.p.A.

IT - Consorzio Scuola Comunità Impresa. CSCI

LT - Kauno Dainavos progimnazija

LT - Non-Formal learning club

MK - SOU Orde Copela Prilep

MK - ECO LOGIC



Agenda – CIRCLE LAB European Seminar

Date: October 4th 2022; 13.30 – 17.30

Address: Vytauto pr. 44, Kaunas 44329, Lithuania

<i>Start Time</i>	<i>Agenda</i>	<i>Presenter</i>	<i>Venue</i>
13.30	Gathering and Welcome coffee	n/a	Conference room
13.45	Introduction: The Circle Lab Project	Olga Hendel – MDU (Sweden)	
14.00	The Educational Modules (IO1)	Paolo Manes – Sviluppo Chimica (Italy)	
14.15	The Training 4 Trainers (IO2)	Maria Chiara Pizzorno – CSCI (Italy)	
14.30	The toolkit 4 Students (IO3)	Ecologic (North Macedonia) Petar Stojcevski	
14.45-16.00	Workshop – Part I (subgroup session) Engaging with the Audience for IOs testing	IOs leader in collaboration with External Participants	Groups are divided in 4 rooms for subgroup work
14:45	Coffee Break	n/a	
15.00	Subgroup work Group 1: Working on LU 3 Group 2: Working on LU 4 Group 3: Working on LU 5 Group 4: Working on IO3	IOs leader in collaboration with External Participants	
16.00-17.00	Workshop – Part II (plenary session) Presentation and discussion of subgroup work	IOs leader in collaboration with External Participants	Conference Room
17.00	Group 1: Working on LU 3	Spokeperson Group 1	
17.15	Group 2: Working on LU 4	Spokeperson Group 2	
17.00	* Group 3: Working on LU 5	Spokeperson Group 3	
17:15	Group 4: Working on IO3	Spokeperson Group 4	
17.30	Wrap up and conclusions	Olga Hendel MDU	
19.30	Gala Dinner	n/a	

Workshops Guidelines

Overall goal:

The Objective of the Seminar for **CIRCLE LAB** *innovative learning approach for circular chemistry in secondary education*, is engaging the audience in the piloting and fine-tuning phase of the Intellectual Output 2 and 3. The audience will be divided in 4 subgroups. Three groups will give feedback on 3 Learning Units (the Training for Trainers Program is made of 7 LUs but the core LUs were chosen) and propose educational activities to transfer these innovative topics in Secondary Education. The 4th Group will pilot the Circle Lab Game and will provide ideas and inputs for its further development.

Group Composition:

Group 1,2 and 3 are composed of adults: teachers, trainers, and other stakeholders (representative of NGOs, Companies, etc.). The participants will voluntarily join a subgroup on the basis of their preferred topic, however a balanced distribution across groups will be encouraged (5/6 people per group)

Group 4 is composed of students (max 8/10 students, however, if a higher number of students will participate a 5th group could be created)

Group Task

G1,G2,G3 are testing, giving feedback and inputs on, the 3 core Learning Units of the IO2 Training 4 trainer.

- Group 1: Working on LU 3 – “Managing waste as a resource”
 - Group 2: Working on LU 4 – “Chemical Recycling”
 - Group 3: Working on LU 5 – “Solar Energy – Innovative materials for solar cells”
 - Group 4: Working on IO 3 – “Guardians of the Green Galaxy”
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- **Group Facilitators** (working in pairs)
 - Group 1: Working on LU 3 – Biljana Apostoloska & Paolo Manes
 - Group 2: Working on LU 4 – Gema Valera Vázquez & Rudbeckianska School
 - Group 3: Working on LU 5 – Vaida Matulevičiūtė & Zivile
 - Group 4: Working on IO3 – Petar Stojevski, Eco Logic
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- **Spokesperson:** Each group should identify a spokesperson who is in charge to take notes from the group discussion and present the results of the subgroup work (ppt or o flipchart).

Instructions – Group 1,2,3

Duration: the subgroup work will last an hour and a half

<i>Duration</i>	<i>Activity</i>
20´	Read the LU presentation (PPT)
15´	Discuss in group, by answering the following question “ How to integrate this specific topic in Secondary Education Curriculum (at what grade/age, which course or subject, possible connection with other subjects, etc.)? ”
45´	<p>Propose a practical educational activity in order to transfer the LU topic into Secondary Education (e.g., a challenge-based or problem-based project, a game, a community-based project etc.).</p> <p>The group may have an open and free brainstorming or follow these steps:</p> <ul style="list-style-type: none">• Decide the activity target group and the actors involved (age/grade, 1 or more classes, experts, stakeholders etc.)• Describe the main educational goal• Describe the method (individual or group work, indoor or outdoor, investigating or creating content, real or fictional/gaming)• Describe the main activities• Describe the expected results/products
10´	Identification of the spokesperson and preparation of the presentation for the plenary session

Instructions – Group 4

Duration: the subgroup work will last an hour and a half

<i>Duration</i>	<i>Activity</i>
10´	Read the instructions of the game „Guardians of the green galaxy “
45´	<p>On the start of the session choose:</p> <ul style="list-style-type: none">• Play against the evil pollutants – Identify and eliminate the compounds from their way into the earth• Create the green machine- Identify and create the green compounds from the planet itself <p>Result: Creative solution for making a positive connection between chemistry and heroism</p> <p>* In this session the participants will be followed by the moderator through playing the game with scenarios and questions.</p>
20´	Evaluation questionnaire using sticky notes about the game
10´	Identification of the spokesperson and preparation of the presentation for the plenary session



Further Information

Address: Conference Center – Vytauto pr. 44, Kaunas 44329, Lithuania

Transport: The transportation will be reimbursed to all participants. Furthermore, a shuttle bus will transport participants from the Conference Center to the Gala Dinner

Restaurant: For those who would like to participate to the Gala Dinner, the dinner menu should be booked in advance, and it will be sent in a separate form.

Online attenders

Event Format and questionnaire: The event will be streamed and online participants will be invited to express their opinion by answering an online questionnaire that will be shared during the meeting.

Registration Form: Please register in the link provided in the invitation to the event. The event will be recorded. Registration Link--> <https://forms.gle/6jGVMzh6i3uk1tGZ9>

Recording disclaimer

The event will be recorded for dissemination purposes for the CIRCLE LAB project to be streamed in the CIRCLE LB channels. Therefore participants who do not agree with being recorded should let us know in advance by email. The project will not disclose any personal information to third parties.



Contacts

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