

ANNUAL REPORT 2024



# THE SCITEACH CENTER



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**The SciTeach Center is affiliated with the Institute for Teaching and Learning, Department of Education and Social Work, at the Faculty of Humanities, Education and Social Sciences of the University of Luxembourg.**

Visit the SciTeach Center website at [sciteach.uni.lu](https://sciteach.uni.lu)

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# THE SCITEACH CENTER TEAM



**Our Annual Report highlights our main accomplishments and initiatives for 2024. We are excited to share a glimpse into our collective achievements and hope it inspires you to reach out to our team.**

**SciTeach Center Director, Prof. Dr. Christina Siry**



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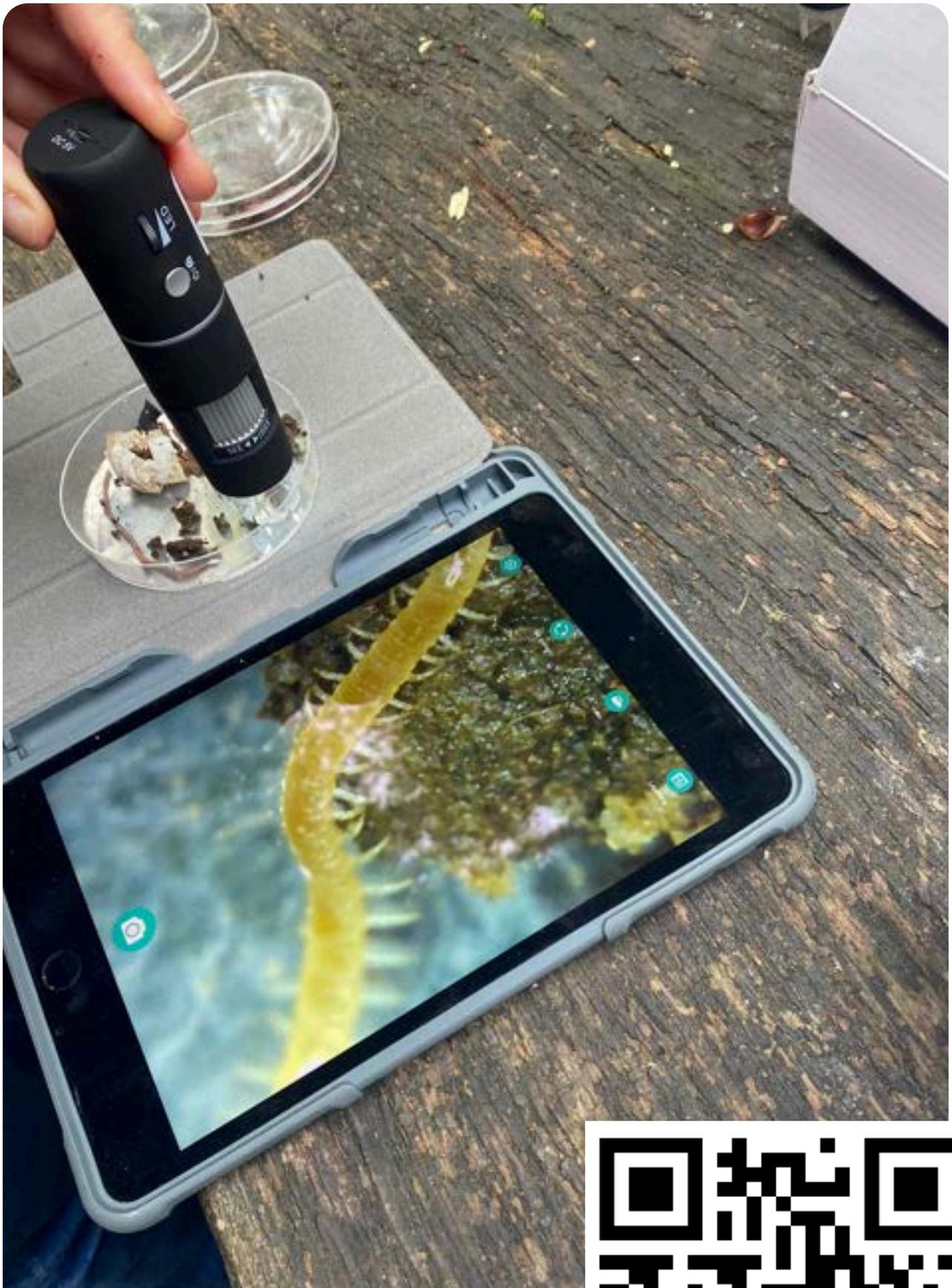
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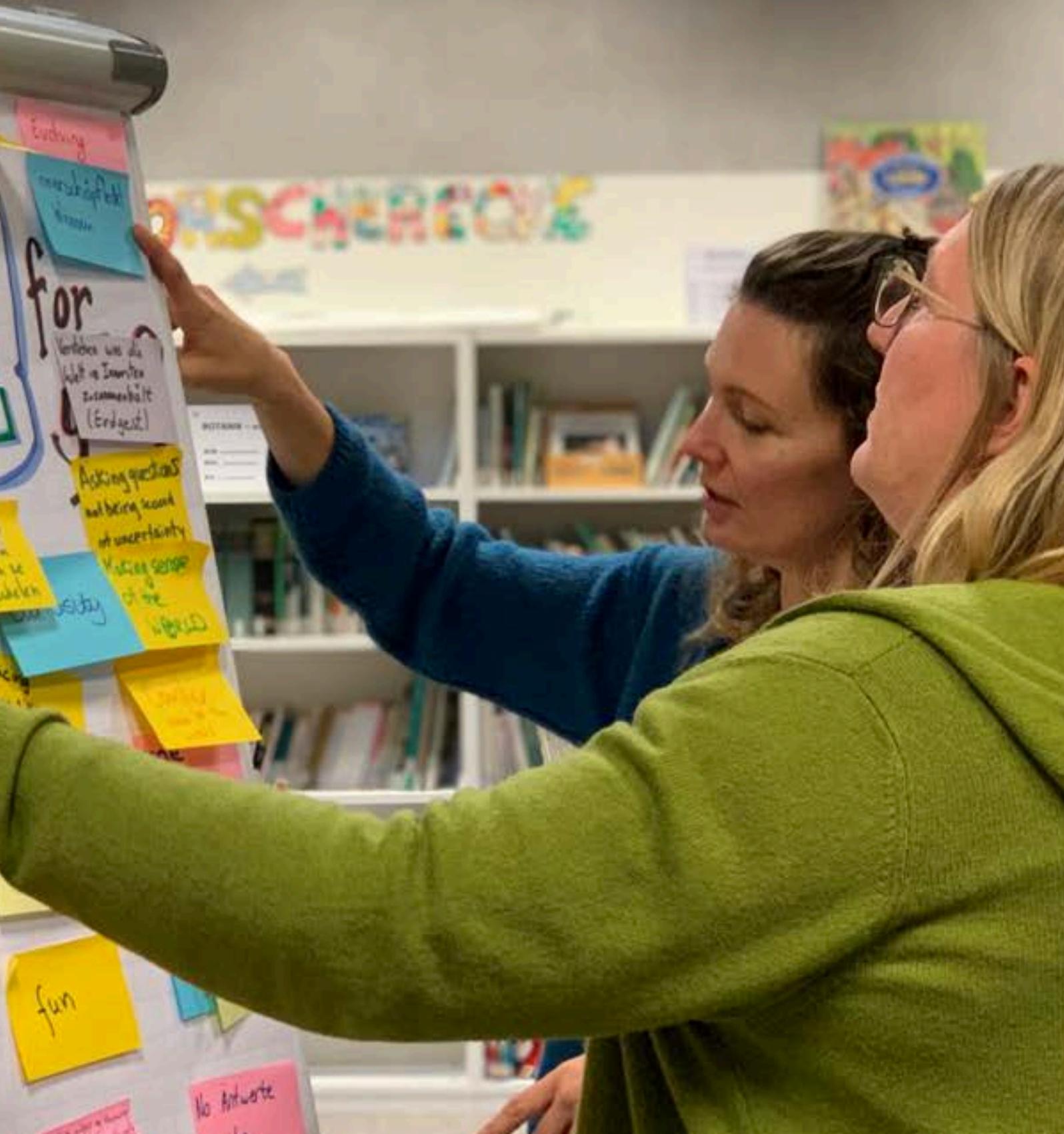
Future Initiatives



*Scan the QR-code  
to visit our website*



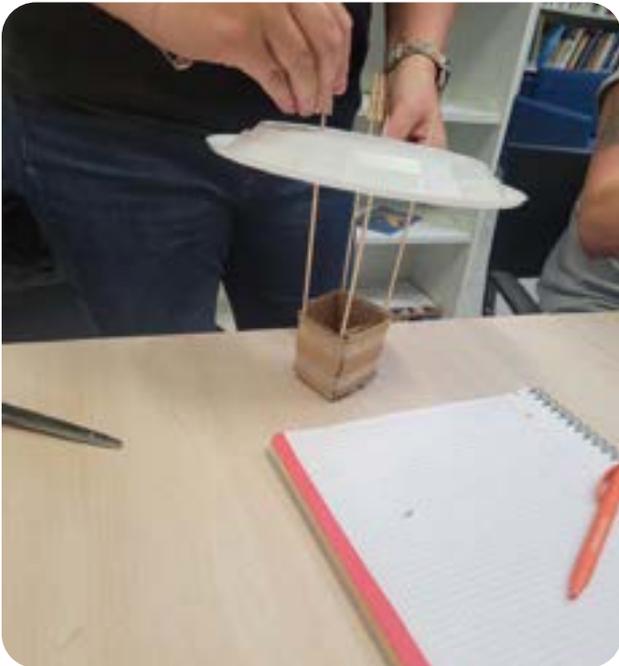
# 1



Euchung  
überhaupt  
für  
Verbleib was die  
Welt in Isomeren  
zusammenhält  
(Endzeit)  
Asking questions  
and being scared  
of uncertainty  
Having sense  
of the  
possibility  
fun  
No Antworte

# THE SCITEACH CENTER

The SciTeach Center is a teacher education resource center at the University of Luxembourg dedicated to promoting the teaching and learning of science in primary and pre-primary grades, through inquiry-oriented and futures-oriented initiatives.



Through the development of innovative teacher education offerings, the SciTeach Center team creates diverse professional learning opportunities for Luxembourg's teachers, grounded in a research-based process of co-design between teachers and researchers. Founded in 2016 in collaboration with the MENJE, Ministry of Higher Education and Research, and the FNR, the SciTeach Center has evolved through a range of initiatives to respond to the needs from the field, including developing teacher workshops and courses, teaching and learning resources, and working in collaboration with partner schools.



2



# TEACHER WORKSHOPS

Together with teachers, the SciTeach Center team co-develops teacher workshops grounded in the use of inquiry-based pedagogical approaches with children. The SciTeach Center engages teachers in activities and experiences, supported with opportunities for reflecting on their teaching practice, providing space for direct implementation with their students.



# TEACHER WORKSHOPS

Throughout the 2023/2024 school year the SciTeach Center team co-designed and facilitated more professional formation than ever before across a range of STEAM, STEM, and sciences themes.

1346

**Teacher  
Contact Hours**

179

**Participating  
Teachers**

18

**Workshops  
Offered**



95%

**Respondents would recommend the  
workshop to a colleague**

*“Super datt sou vill konnt experimentéiert,  
zesummen geschafft, ausgetosch, gelaacht  
ginn.”*

-Teacher-Participant



3

**Let's teach science!**  
Pädagogische Handreichungen des  
SciTeach Center der Universität Luxemburg

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# RESOURCES: MATERIALS & BOOKS

The SciTeach Center is a resource hub for teachers, educators, and university students, offering materials and books for loan to use in classrooms aimed at inspiring innovative science learning experiences for young children.

Materials support children's investigation, inquiry and hands-on exploration of science phenomena. Each year the catalog of materials provided is expanded, and we are broadening our online open-access pedagogical resource offerings.



350

**Materials  
Loaned**

103

**Books  
Loaned**

# PUBLISHED RESOURCES

**Lët'z Teach Science** is a digital compendium available freely online and co-developed by the SciTeach Center team in collaboration with partner schools through the Sci2School Project, funded by the FNR and Ministry of Education, providing inquiry-based and competency-oriented pedagogical resources for teachers. Topics include makerspaces, school gardens, and inquiry-based instruction with children.

Collaborations with partner schools support the development of **"Lët'z Teach Science"** - a series of pedagogical guides to foster inquiry-based teaching and learning.



Scan the QR-code to download the resources



# PEDAGOGICAL KITS

The SciTeach Center also offers pedagogical kits that contain necessary materials to develop, organise, and conduct inquiry-based, hands-on scientific investigations. These kits include books in different languages, games, interactive materials, and objects to facilitate students' engagement and learning. The SciTeach Center provides these kits to explore: Three Little Pigs kit (for construction and wind exploration) and Bridges and Towers kit.



New kits are in development on the topics of flying and gliding, ice and sliding, and light and shadows, to start. Stay tuned for new kits!



# 4

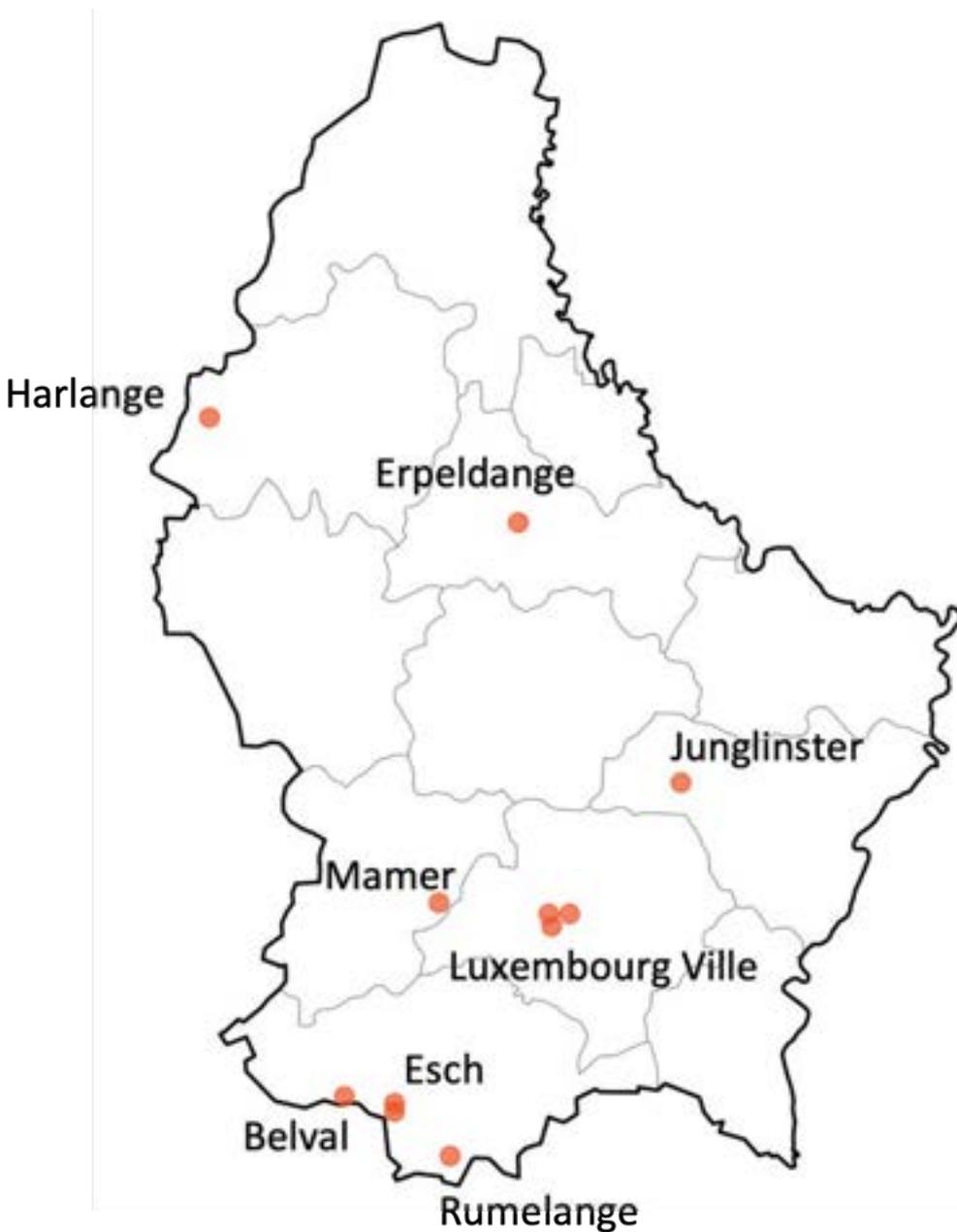
*“So that we as a whole school can rethink science teaching.”*

-Partner School Teacher

# PARTNER SCHOOLS

The SciTeach Center partners with primary schools across Luxembourg to enhance science education through the Sci2School initiative. Initially established through FNR Promoting Science to the Public Flagship funding, building partnerships continues to be a key focus.

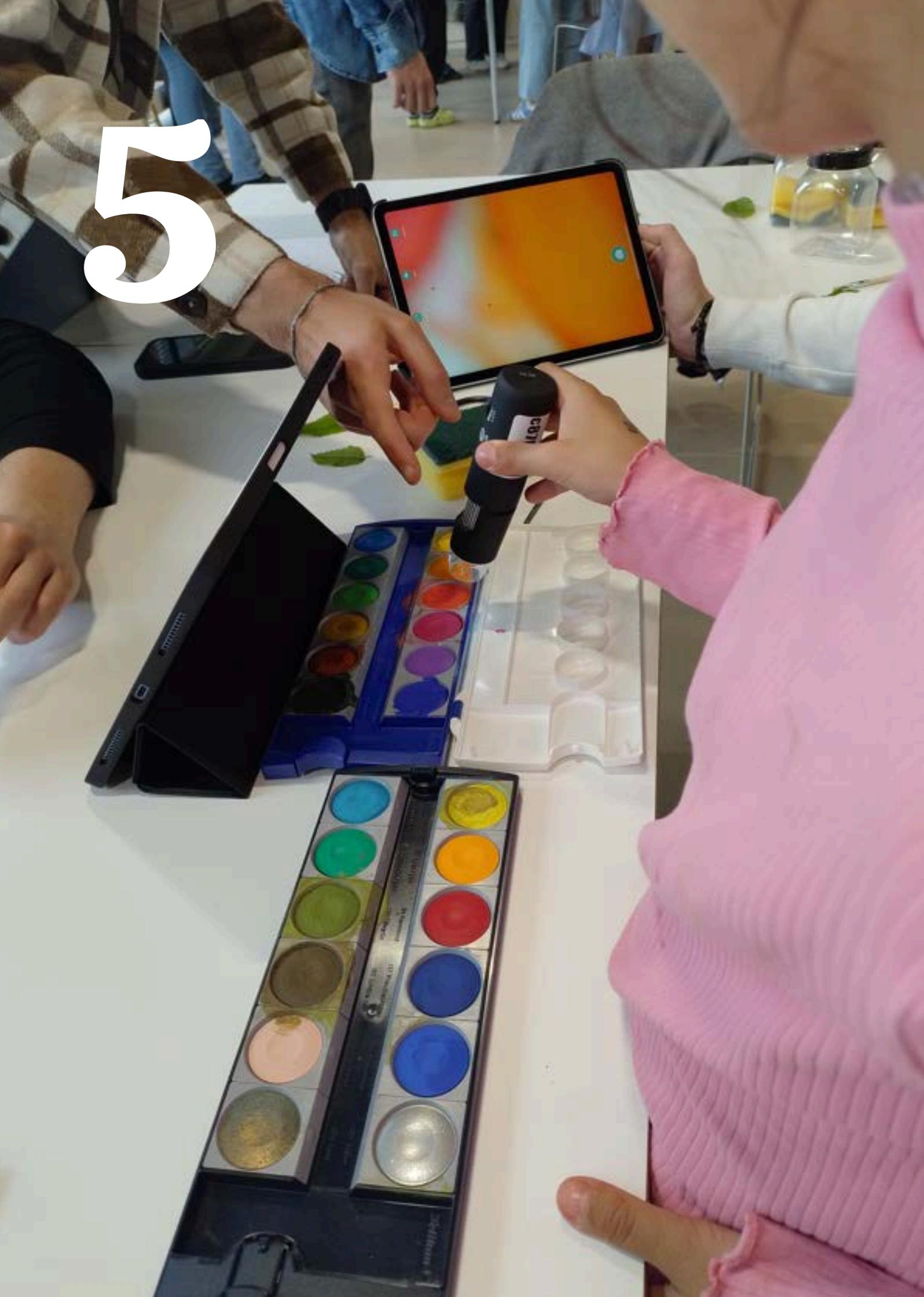
Joint professional development opportunities within school communities offer ways to address current challenges and meet evolving educational needs collaboratively with teachers.



11

**Partner Schools  
2024/2025**

5



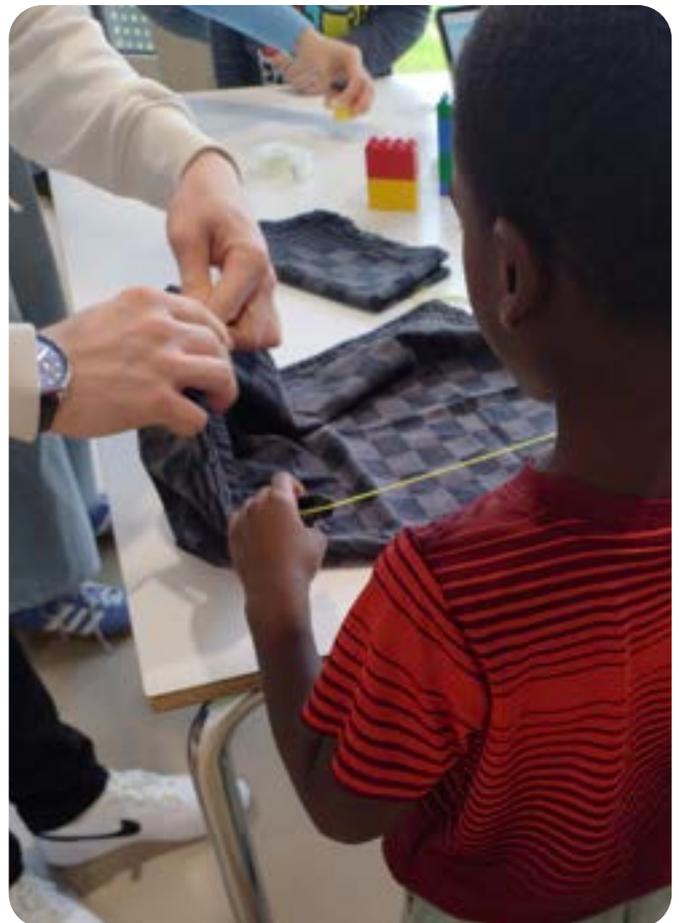
# PRE-SERVICE TEACHERS

The SciTeach Center actively supports pre-service teachers' learning. We bring projects co-developed with teachers and researchers into our Bachelor's courses, supporting pre-service teachers to investigate with, critically analyze, and learn from innovative, inquiry-based science-teaching materials and approaches. Their learning grows through our partnerships with the field.



183

**Pre-service Teachers  
Engaged**



6

is Science for you?

the lonely stepchild

alltägliches  
Staunen

Von de Sinner  
an de Kappa

an opportunity

ld

FIN @ SCHOOL

Erdgeist (beide!)  
Nurstenen  
1/4 10

# SCITEACH RESEARCH

Our work lies at the intersection of research and practice, which we frame as 'research grounded in teaching / teaching grounded in research'. This supports our locally contextualized research, with an international focus. For a full list of our latest internationally-relevant research, visit [sciteach.uni.lu/research](https://sciteach.uni.lu/research).

## 2024 Research publications from the SciTeach Center team members

Siry, C., Wilmes, S.E.D., & Frisch, R. (2024). **Agentic student science engagement: Highlighting open-ended pedagogical structures in a plurilingual classroom.** *International Journal of Education Research*, 127.

Kersting, M., Danielsson, K., Fleury Mortimer, E., Olander, C., Siry, C., & Tang, K. S. (2024). **From founding voices to future visions: languages and literacies in science education.** *International Journal of Science Education*, 1-18.

Wilmes, S.E.D., & Siry, C. (2024). **Bringing the material and the body into focus: Young children's science engagement in a multilingual classroom.** *Research in Science & Technological Education*, 42, 114-132.

Siry, C. (2024). **Inclusive science education in the early years: A prologue.** In G. Lemkow Tovas [Ed]. *Inclusive science education in the early years*. Graó publishers.

Wilmes, S.E.D., Siry, C., & Tang, K. S. (2024). **Drawing together international perspectives on material and embodied aspects of science education: Introduction to the Special Issue.** *Research in Science & Technological Education*, 1-7.

15

**Conference  
Presentations**

5

**Visiting  
Researchers**



Together with teachers.  
Through research.  
Fostering Science learning.

# 7

Together with teachers. Fostering science learning. Driven by research.

SciTeach Center

Teaching Research

SciTeach Center  
University of Luxembourg  
Fostering Science Learning  
in Support of Teachers

ifen

Randorfschule NT

sciteach.uni.lu



# PROJECTS HIGHLIGHTS

The SciTeach Center has a variety of ongoing, science education projects that connect research and teaching. These projects, often supported by outside funders, allow for a diversity of science education, sustainability and STEAM initiatives.

**EARLY STEAM**

2022-2025

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**SUPERSCI**

2020-2024

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**MULTIPLIKATOREN NETWORK**

2023-2027

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**WAY2ESD**

2022-2026

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**SCITEACH REFLECT**

2024

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*“Werde mich mit einer Geschichte in Zukunft länger und in mehreren Kompetenzbereichen beschäftigen, nicht nur vorlesen und vorzeigen, sondern erzählen, kreative und vorzeigen lassen.”*

*-Teacher-Participant*

# EARLY STEAM

The project promotes STEAM (Science, Technology, Engineering, Arts, Math) competencies for Luxembourgish early childhood educators. The project resulted in a series of STEAM-based age-appropriate professional development workshops, as well as teaching resources and kits available for teachers to borrow. Workshops' topics include *Bridges and Towers*, *Flying and Gliding*, and *Science with Children: STEAM and the Three Little Pigs*.



119

**Teachers and  
Educators**

66

**Workshop  
Hours**

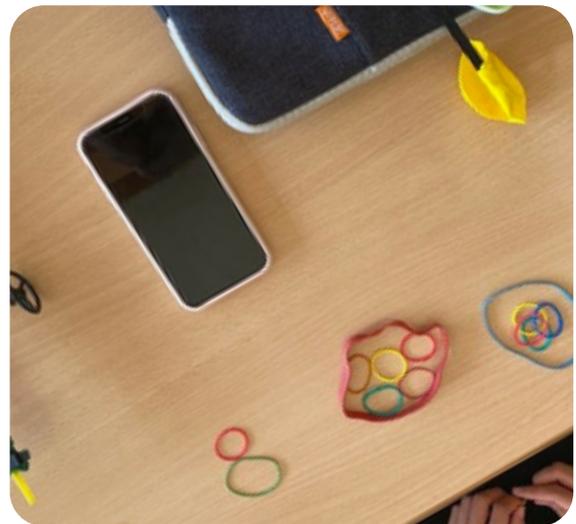


*“Die einzelnen Bereiche sollen nicht getrennt werden sondern ineinander einfließen.”*

-Teacher-Participant

# SUPERSCI

The project looked into the collaboration between teachers and researchers as the SciTeach Center team developed the workshop *Science and Language*. This professional learning opportunity explored interdisciplinary competencies with primary teachers in Luxembourg. Amongst the activities done, we reflected on our language repertoire by outlining our languages, and we engaged in investigations to explore how language and science skills can be enhanced together.

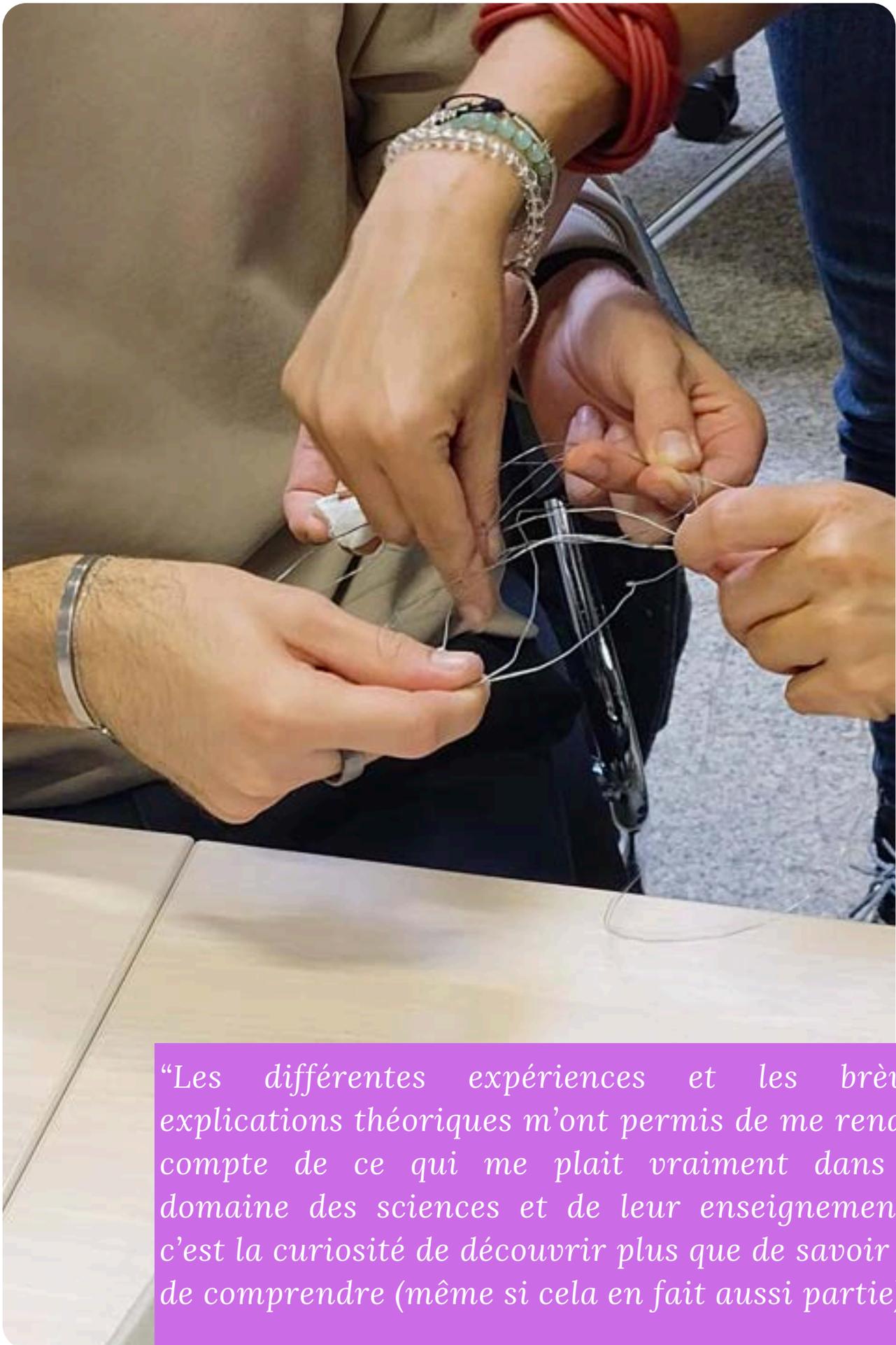


18

**Workshop  
Hours**

18

**Participating  
Teachers**



*“Les différentes expériences et les brèves explications théoriques m’ont permis de me rendre compte de ce qui me plait vraiment dans le domaine des sciences et de leur enseignement : c’est la curiosité de découvrir plus que de savoir où de comprendre (même si cela en fait aussi partie).”*

-Multiplikatoren Network Participant

# MULTIPLIKATOREN NETWORK

The Multiplikatoren Network is a collaborative professional development initiative that brings together in-service elementary science teachers and researchers. This network aims to transform elementary science education through hands-on, inquiry-based methods. By positioning teachers as collaborators, the network fosters systemic improvements in science teaching across Luxembourg.

5

**Teacher  
Leaders**



10

**Workshops  
Developed**

40

**Workshop  
Hours**





*“Ech hat en AHA-  
Moment!”*

*-Teacher-Participant*

*“Et muss een sech just trauen  
eppes Neies ze maachen.”*

*-Teacher-Participant*

# WAY2ESD

The Way2ESD project aims to make Education for Sustainable Development (ESD) more approachable for primary school teachers. In collaboration with in-service teachers we co-develop professional development workshops with national examples for ESD implementation. Including teachers in the development process makes the workshop content more accessible for participants and responsive to their needs.



87

**Teachers and  
Educators**



176

**C3 & C4 Children**

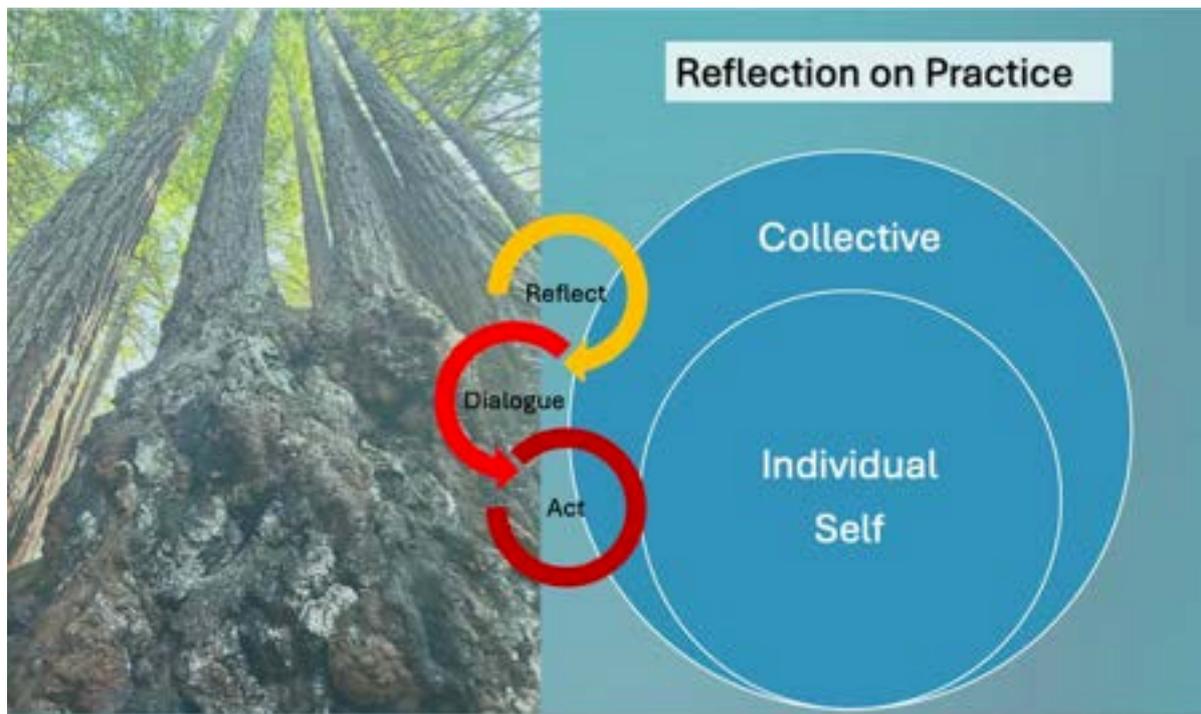
*“Our exchange about the SciTeach Center’s work with teachers underscores that there are many more opportunities for us to support diverse students in engaging in science in transformative ways. I am grateful for this exchange as it helps me reflect on next steps forward to make this happen in our work here in California.”*

*-Teacher-Participant*



# SCITEACH REFLECT

Essential to the SciTeach Center team's collaborative development and research with teachers are collaborative reflection processes. SciTeach REFLECT supported an international research exchange and exploration with researchers at the University of California, Berkeley, USA, for gaining deeper insights into reflective processes.



2

**Research  
Publications**

3

**Invited  
Publications**

2

**Projects in  
Development**

# 8



# PUBLIC OUTREACH

**February 2024:** IFEN Teacher Researcher Day

**March 2024:** BNE Foire

**June 2024:** FNR, PSP Flagship Networking Event

**September 2024:** FNR, SciCom Networking Event

## SCIENCE.LU ARTICLES



### NATURWISSENSCHAFTEN & SPRACHE

Lët'z talk about Science:  
Was hat das mit Sprache zu tun?



### INNOVATIVE LERNMETHODEN IN DEN NATURWISSENSCHAFTEN

Weiterbildung mitgestalten  
- Wenn Lehrkräfte zu  
Multiplikatoren werden



### BILDUNG FÜR NACHHALTIGE ENTWICKLUNG

Wie können  
Nachhaltigkeitsthemen in  
der Grundschule umgesetzt  
werden?



### MINKT MIT VORSCHULKINDERN

Wie die drei kleinen  
Schweinchen helfen,  
MINKT-Kompetenzen zu  
fördern



9



# FUTURE INITIATIVES

New and future SciTeach Center projects will continue to support teachers working in partnership with researchers to co-develop, implement, document, and disseminate innovative participatory actions with their students in various ways, and these will serve as the basis for researching related education practices and outcomes.

## EIS GESCHICHTEN; EIS ZUKUNFT! (2024-2027)



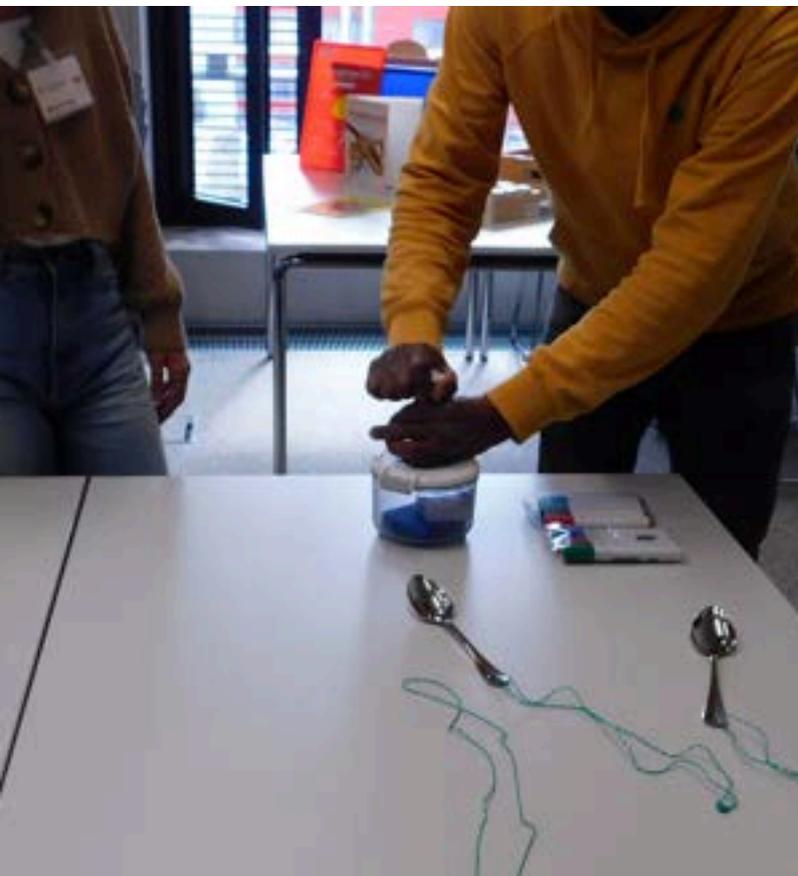
**Eis Geschichten; Eis Zukunft** will support teachers' sustainability science understandings and digital competencies through developing an approach for multimedia stories emergent from teachers' sustainability-focused lessons, and create professional development courses focused on pedagogical co-design and digital storytelling. Funded by the FNR for three years, it will support teachers in exploring sustainability issues and finding ways to give voice to teachers and students.

## SCILINK (2025)

**SciLink** is a pilot project "Linking science and language learning in a classe d'accueil". Funded by the Cinven Foundation, the project has three goals:

1. Conceptualize, design and implement place-based lessons that are not bound to languages, while furthering target languages.
2. Create multilingual science resources.
3. Highlight and disseminate innovative investigations as inspiration for other classes d'accueil.





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ON OUR SOCIAL MEDIA**



FACEBOOK



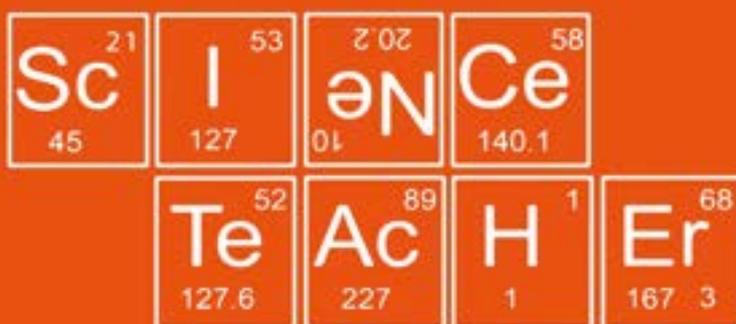
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E grouse merci  
to our Supporters!



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