



Oulu2026
Euroopan kulttuuri-
pääkaupunki



STEAM pedagogy at Hintta Daycare Centre

Saana Murto, Early Childhood Education Teacher

Hanna Lassila, Early Childhood Education Teacher

Oona Vaitiniemi, Deputy Head of Hintta Daycare Centre



OULU

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Hintta Daycare Centre

Hintta Daycare Centre began operating in 1968. Move to the new facility took place in January 2022.

- Extended opening hours from 5.00 am to 10.30 pm
 - 135 children from 9 months to six-year-old
 - 8 groups
 - 35 staff members
- Professions of staff working in the centre:
 - ECEC Teacher, Bachelor of Social Services in ECEC, ECEC Child Carer, ECEC Special Education Teacher, ECEC Special ChildCarer, Head of ECEC Centre and Deputy Head of ECEC Centre
- Base of our education:
 - [National core curriculum for early childhood education and care](#)
 - [Varhaiskasvatussuunnitelman perusteet 2022 ja Oulun kaupungin varhaiskasvatussuunnitelma](#)
 - Which includes STEAM pedagogy
 - STEAM pedagogy and cooperation with Laanila Campus

STEAM Pedagogy in Early Childhood Education

STEAM pedagogy strengthens children's critical thinking, problem-solving skills and enthusiasm for lifelong learning.

- STEAM comes from words science, technology, engineering, arts and mathematics.
 - These different subjects are integrated into creative and investigative activities.
- Learning through projects is a central part of STEAM pedagogy. Children explore, design, experiment and develop their own ideas through hands-on activities.
- The learning process emphasizes discovery and the joy of experimentation - mistakes are seen as a natural and valuable part of learning, not as failures.



STEAM-Play Room



- Toys that encourage exploration, creativity and problem-solving
- Open-ended materials that do not show one "right" way to play
- Suitable for children of different ages
- Children can express experiences and learning through play

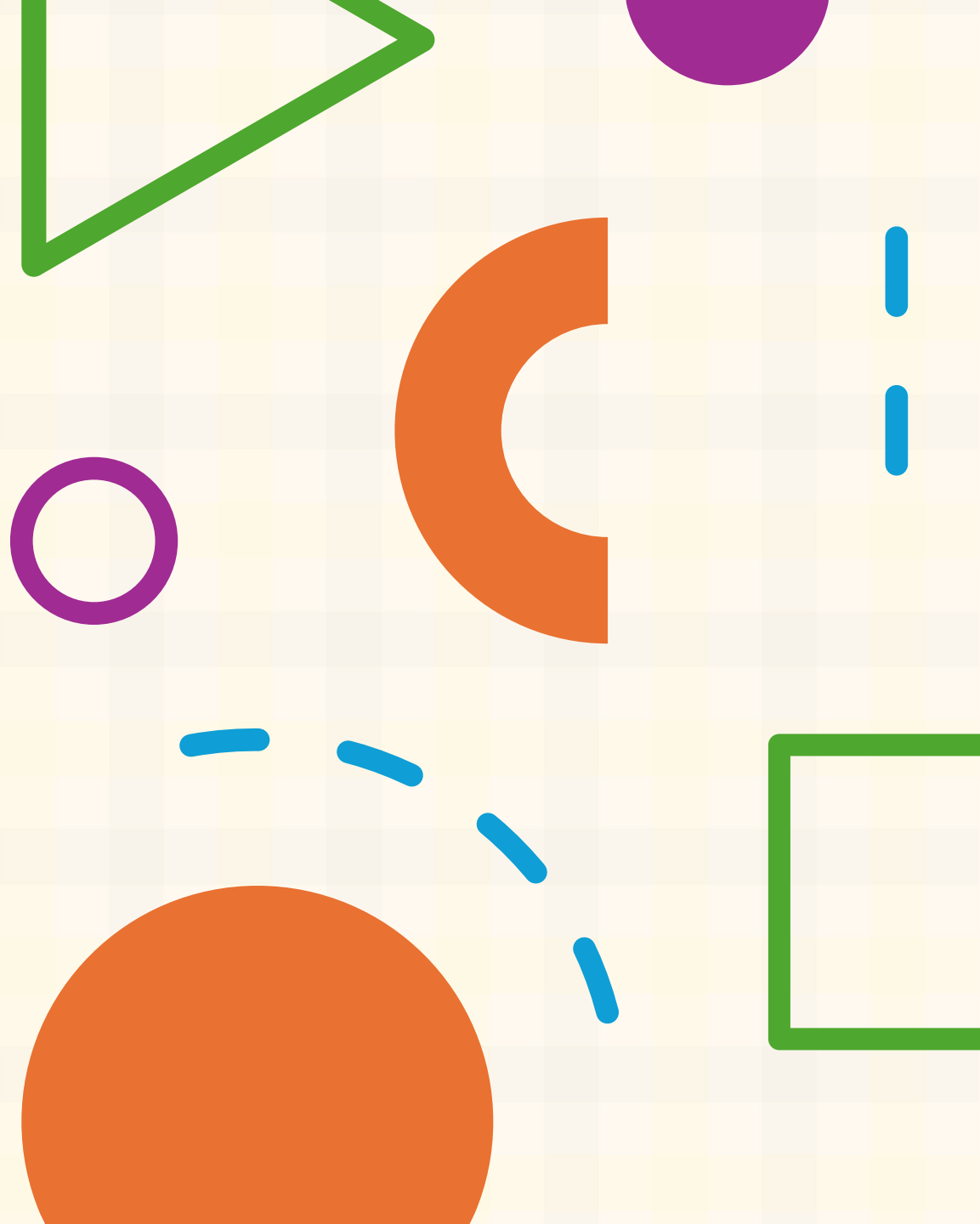
STEAM Makerspace

- A space for exploration and hands-on learning
- Learning happens in many environments: indoors and outdoors
- Wide range of science tools and maker materials
- Building prototypes, exploring materials, and practicing problem-solving



THE OULUJOKI RIVER-PROJECT

- This project has been designed for 3–6-year-old children and is inspired by the Oulujoki River, which flows near our daycare.





Workstation 1: Exploring Water





Workstation 2: Creative River Landscape Building

Workstation 3: Bark Boats - building, creating and exploring with tools



Workstation 4: Riverside Yoga



Lumoava polku

- Lumo Light Festival is a big festival in City of Oulu in late November
- It is a tradition to participate to it with our Laanila Campus area
 - Our Lumo event is called "Lumoava polku" which means "Enchanted path" in english
 - Presenting STEAM projects
 - Same topic with different insights, this year it was snowflakes





Funky Hats Afternoon

- We have another yearly event called "Hassujen hattujen iltapäivä" as in "Funky Hats afternoon"
- It's usually arranged in May
- It's similar to Lumoava polku, but in this event parents can also join and work with the kids related to our STEAM projects



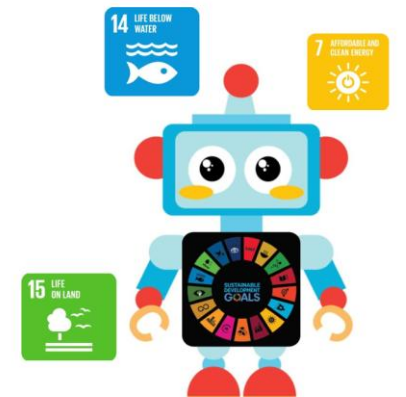
Erasmus+ Project: Creative Storytellers

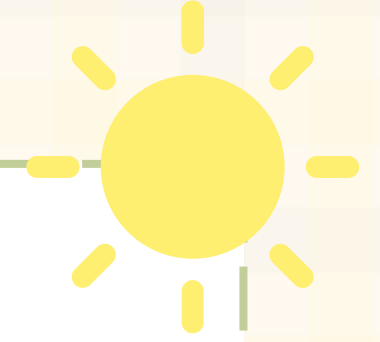
- 2-year Erasmus+ project
- Focus: tools and training for teaching young children about sustainability
- Partner countries: Portugal, Germany, Greece (Athens), Austria, and Finland
- Outcomes for our kindergarten:
 - **Roby the Robot**
 - **Agenda 2030 cards**

Family Collaboration After the Erasmus+ Project



- We wanted to involve parents in what we learned through the project
- Parents joined our annual “Funny Hats Event” to explore the Agenda 2030 goals
- Workshop: families created *Sustainable Future Hats* for Roby the Robot
- Parents and children were enthusiastic and creative
- Later, children invented stories about how their hats help Roby save the world





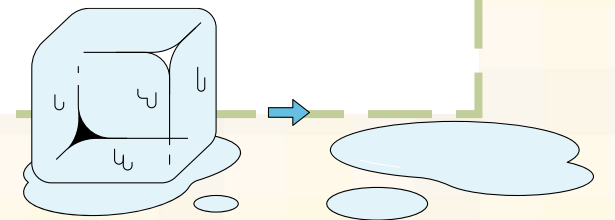
Workstation 1: Exploring Water

Children naturally explore the world using all their senses: by touching, looking, listening, smelling, and even tasting. Playing with water outside is often one of their favorite activities.

One group explored water and its elements. For example, they felt the water with their hands and think together: Is it cold or warm?

They listened the sounds that water makes and wondered what happens when it gets cold? They also tested what floats and what sinks in water.

At the same time, they practiced math skills by counting how many toys they could find inside icecubes. This activity helped children learn about science and practice math in a fun way.



Workstation 2: Creative River Landscape Building

At this learning station children freely created and built their own river landscapes using recycled materials.

This activity was part of our STEAM-based learning where children use creativity, problem-solving, and hands-on making. They explored shapes, design and cooperation while working together. There are no ready-made instructions – children used their imagination to invent and build freely.

This kind of open-ended activity supports innovation, self-expression and important future skills. It also shows how learning can be joyful and meaningful through play and making.



Workstation 3: Bark Boats - building, creating and exploring with tools

At this station children used real, child-friendly tools to build their own boats from bark and other materials. They got hands-on experience with tools such as small saws, hand drills and hammer, learning how to use them safely.

Using tools and building something with their own hands supports children's fine motor skills, coordination, concentration and confidence. Building boats helped them understand basic engineering ideas in a playful way.

After building, children tested their boats by floating them in water and observed what worked and what could have been improved. This encouraged experimentation and problem-solving which are important elements of STEAM learning through making.





Workstation 4: Riverside Yoga



Riverside Yoga was one of the first STEAM projects at Hintta Daycare Center. During the 2021–2022, we carried out this STEAM project in collaboration with Laanila Campus.

This project involved both primary and secondary school students working together with children from various local daycare centers.

School students visited different daycare centers in the area to collect stories from preschoolers related to the Oulujoki (Oulu River) theme. Based on these collaboratively created stories, we developed a new, fully narrative-based yoga experience at our daycare. Riverside Yoga has remained part of our activities even after the project officially ended. It has also been performed and practiced together with the children's parents.

