



TURKU
ÅBO



STEAM education tackling global challenges

STEAM Turku

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Warming up



**One of the history's greatest mysteries:
Is Doctor Schrödinger's cat dead or alive?**



To continue ..

- What kind of problems and challenges of education and society in general can be solved by STEAM education?
- Instructions
 - 2 minutes of thinking solo
 - 3 minutes of discussion with your neighbour
 - Choose 1-2 most essential and share them with others



City of Turku Education Division

81 daycare centers/preschools

41 comprehensive schools

10 upper secondary schools

7 vocational schools at the Turku Vocational Institute

adult education services

over **40,000** students (including daycare), number of staff **3,700**

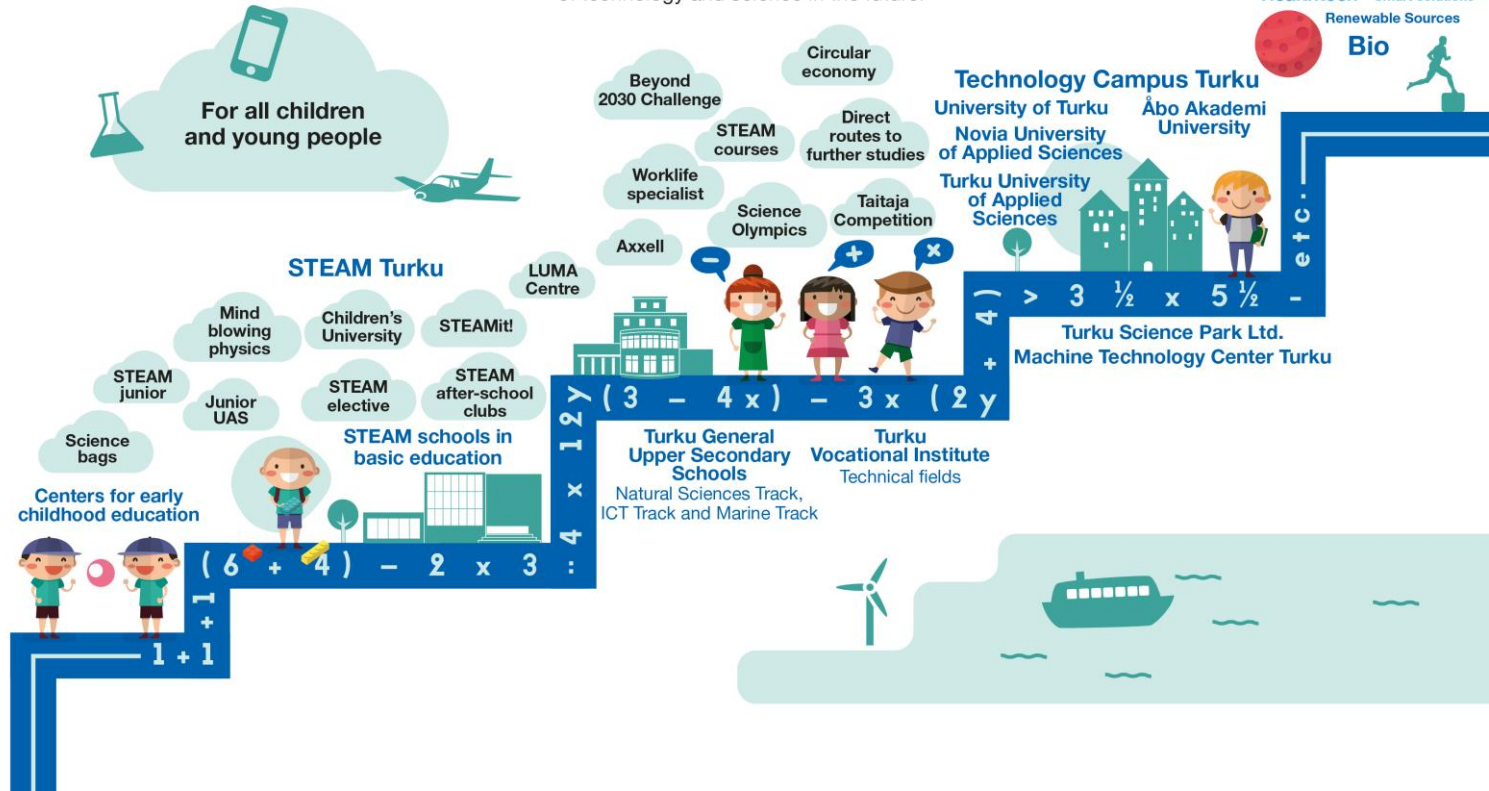
For more information,
see www.turku.fi/education

STEAM TURKU

Jump in at any point!

On the science and technology path, students of all ages can study more and more profoundly natural sciences, math, and arts. They can improve their problem-solving skills by devising solutions to everyday problems through teamwork. They will also learn to creatively utilize the possibilities of technology and science in the future.

For all children and young people





STEAM Turku is part of the City of Turku's Technology Campus cooperation.

STEAM Turku is also linked to the business policy of the entire city.

Long-term work is made possible through the city's permanent financing, which is supported by various externally financed projects.



Participation

There is a personal path for every pupil, student and teacher into the world of science and technology

Openness

All information and practices are shared, everyone can participate in the cooperation, we are ready to learn from others

Innovativeness

We want to seek and find new solutions and opportunities we also believe that failures are learning experiences



STEAM strategy 2025

- To create a new educational operating model for the city of Turku to strengthen the attraction of science and technology
- To build a science and technology path connecting early childhood education, basic education and secondary education
- To offer direct pathways for postgraduate studies and the Turku Technology Campus
- To create new forms of cooperation between early childhood education, primary and secondary education, universities, companies and other stakeholders
- To strengthen the demand for higher education in the field of technology and natural sciences in Turku and Southwest Finland in the long term

STEAM strategy 2025

- To develop new digital solutions, contents of instructions and methods, learning materials and learning environments that spark creativity and enthusiasm for exploration
- To productize and disseminate the results of the project
- To compile Education Services' projects that support STEAM, to avoid overlapping activities, and enhance collaboration between projects
- To support achieving, establishing and spreading of results and good practices, and to ensure the utilization and dissemination of the results of previous projects as part of current development activities

International Cooperation

G-STEAM, Care about IT, LeaderShip

UBC, School to Work

Other international networks and projects

National cooperation

STEAM in Oulu, Technology industries of Finland, Oppiva network, other stakeholders

National development projects



- Increasing the appeal of science and technology
- A science and technology path combining early childhood, basic, and secondary education
- Supporting students: new digital solutions, learning contents, learning materials and learning environments
- New paths to higher education
- Creating new forms of cooperation between all levels of education, universities and companies
- Development projects (a total of 13 in April 2023)

STEAM South-West Finland

Cooperation with the Education Forum for Maritime Industry and Technology

Dissemination and productization of results

Common development projects

New forms of cooperation

STEAM Turku, the big picture



Education Division

Science and
technology path

AR learning
environment

Worklife specialist

Early childhood education

- Support for science education in early childhood education
- Science bags
- Science workshops
- STEAM junior
- STEAMit! funding

Basic education

- Junior UAS
- STEAM elective
- STEAM junior
- STEAMit!
- STEAM schools
- Cooperation with the department of teacher education

Upper secondary schools

- STEAM high school courses
- Direct routes to further studies
- åppi app
- STEAMit!
- Beyond 2030 Challenge science & technology competition

VET

- Roadshows
- Path studies
- Circular economy
- STEAMit!
- Beyond 2030 Challenge
- Basics in Robotics

BSR cooperation

Green STEAM ecosystems

- Erasmus+, 400 000€, lasts until 09/2025
- The city of Turku, Tallinn and Jelgava & the universities of Turku, Tartu and Kaunas
- Four main themes: STEAM practice, teacher skills, local ecosystems and sustainable future
- The what: STEAM practice at schools.
- The how: Upgrading STEAM teaching skills.
- The why: Building local green STEAM ecosystems.
- The Green: The project addresses environmental protection and the especially through the green orientation of the STEAM practices.



What are the success factors?

- Connection to national and local curricula
- Connections to the higher education institutes and companies (biotechnology, technology, medtech, maritime technology)
- High regional interest for STEAM education
- **Voluntarity** – teachers with interest for development projects and STEAM education are supported through STEAM
- School specific courses and STEAM courses for all
- STEAM values



EDIT: Extremely Difficult Task

- Let's think BIG. What is the role of the STEAM education in solving the wicked problems of the future. Figure out one example with a draft activity plan (goals – activities – results)





Questions?



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Thank you!