

STEAM Turku

- Science and technology path in preschool, basic and secondary level education in Turku and Southwest Finland
- A direct route to further studies and the Turku technology campus
- STEAM comes from the words Science, Technology, Engineering, Arts and Mathematics, but let's start with steam...

$$a^2 + b^2 = c^2$$

The Greek inventor **Hero of Alexandria** developed a primitive steam engine back in the first decades AD, but no real use for such an invention was found in the slave-based Greco-Roman society of the time.

This kind of waste of potential is what **STEAM Turku** aims to prevent by seeking to provide all children and young people in Turku with the opportunity to learn new things, apply and utilise what they learn and realise their full potential in the process.

$$\eta = W2/W1 = P2/P1$$

James Watt was a Scottish mathematician and engineer whose improvements to the steam engine triggered the industrial revolution in the late 18th century.

Right now we are living in the middle of a new industrial revolution that will change the world in unprecedented ways.

STEAM Turku wants to support the children and young people of Turku in becoming the heroes of this change and growing into developers of solutions that will benefit all of humanity.

$$\hbar = h/2 \pi$$

The industrial revolution tremendously increased people's standard of living, and in Finland, for example, it caused the economy to grow by well over 2,000% in 1860–2009.

Global economic growth is nowadays at least a hundred times faster than it was in pre-industrial times. Of course this growth has also resulted in major problems, such as the population explosion and climate change, which future engineers, mathematicians, scientists and visionaries will have to solve.

It is these future problem solvers who **STEAM Turku** wants to provide opportunities and expertise to.

What is STEAM Turku?

- ⚙️ A new education operating model administered by the City of Turku for increasing the attractiveness of natural sciences and technology industries
- ⚙️ A science and technology path combining basic and secondary level education, which provides countless opportunities to children and young people of different ages.
- ⚙️ There is a personal path for everyone into the world of science and technology

What is STEAM Turku?

- ⚙️ A direct route to further studies and the Turku technology campus
- ⚙️ **STEAM Turku** wants to increase the attractiveness and demand for technology education in Turku and the entire Southwest Finland
 - ⚙️ For example, the number of people applying for university engineering studies in Southwest Finland is half of the number of applicants in Pirkanmaa – this is one of the things that Steam Turku wants to change

What does STEAM Turku offer?



FOR EVERYONE:

- ⚙️ Strengthens expertise in mathematics and natural sciences
- ⚙️ Increases motivation for employment and further studies
- ⚙️ Provides an opportunity to learn sciences and technology, develop oneself and take part in solving some of humanity's greatest challenges
- ⚙️ Collaboration between different levels of education: workshops, exercises and laboratory work organised by university and university of applied sciences students, for example
- ⚙️ An employment lecturer provides guidance and encouragement for entering technology industries
- ⚙️ Pilot schools in different levels of education take responsibility for the development work

What does STEAM Turku offer?



BASIC EDUCATION:

- ⚙ Different pilot projects in different schools
- ⚙ Mathematics and technology classes
- ⚙ New digital solutions, learning contents, learning materials and learning environments are made available to everyone

What does STEAM Turku offer?



UPPER SECONDARY SCHOOL EDUCATION:

- ⚙ Projects commissioned by companies
- ⚙ Strengthening mathematical skills
- ⚙ Opportunity to complete university and university of applied sciences courses
- ⚙ Direct routes to university and university of applied sciences studies
- ⚙ New digital solutions, learning contents, learning materials and learning environments are made available to everyone

What does STEAM Turku offer?



VOCATIONAL EDUCATION AND TRAINING:

- ⚙️ Turku Vocational Institute serves as a pilot institute
- ⚙️ Projects commissioned by companies
- ⚙️ Companies' and educational institutions' shared new technology-oriented learning environments
- ⚙️ Opportunity to complete university of applied sciences level courses
- ⚙️ Direct routes to university of applied sciences studies
- ⚙️ New digital solutions, learning contents, learning materials and learning environments are made available to everyone

The new digital solutions, learning contents, learning materials and learning environments developed in the pilot schools will be put into use in all schools and at all levels of education.