



# Climate Change in Upper Secondary Schools

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1. Our project
2. Background
3. Pedagogy for a better future

+ Conversation





# **Part 1: Our project**



## Who are we?

Jussi Tomberg

- Advisory Teacher, Biology and Geography Teacher
- Project manager

Miika Siironen

- Study Councillor
- Project worker

Paula Ratava

- Sustainable Development Educator, Teacher (natural sciences, languages)
- Project worker



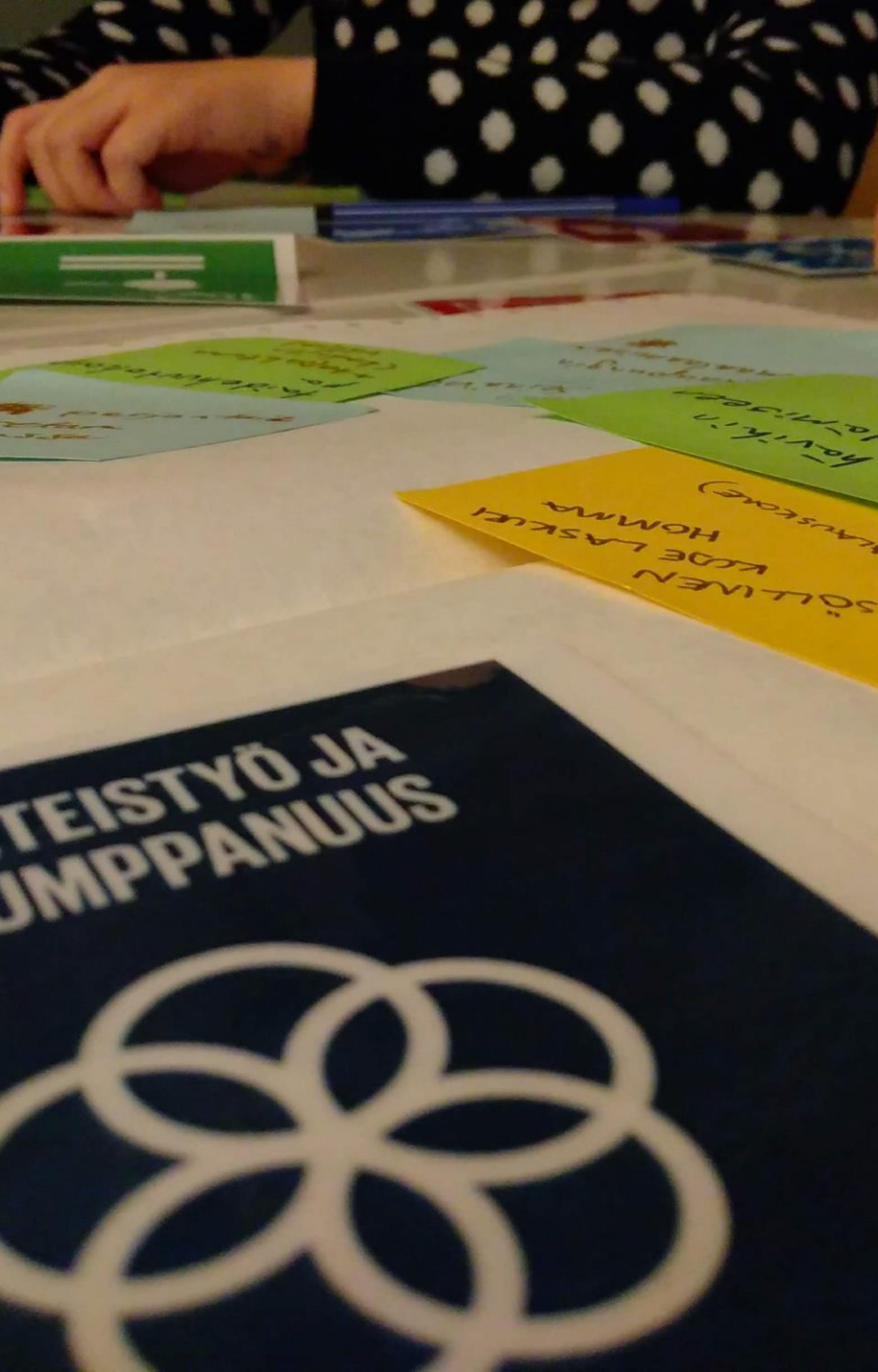
If almost everything we're doing now needs to change, then shouldn't we change what we're doing in our schools?





# Who are you?

What's your relationship to climate education?



## Who else is on board?

- Almost 20 Upper Secondary Schools
  - 30 teachers
  - 40 students
- 40 University / Applied Science students:
  - Different disciplines
  - Teacher trainees
  - International students
- 2 University workers
- Partners





- **When?** From September 2019 to December 2020
- **Where?** In the Upper Secondary Schools of Northern Ostrobothnia
- Funded by the Finnish National Agency for Education and the city of Oulu



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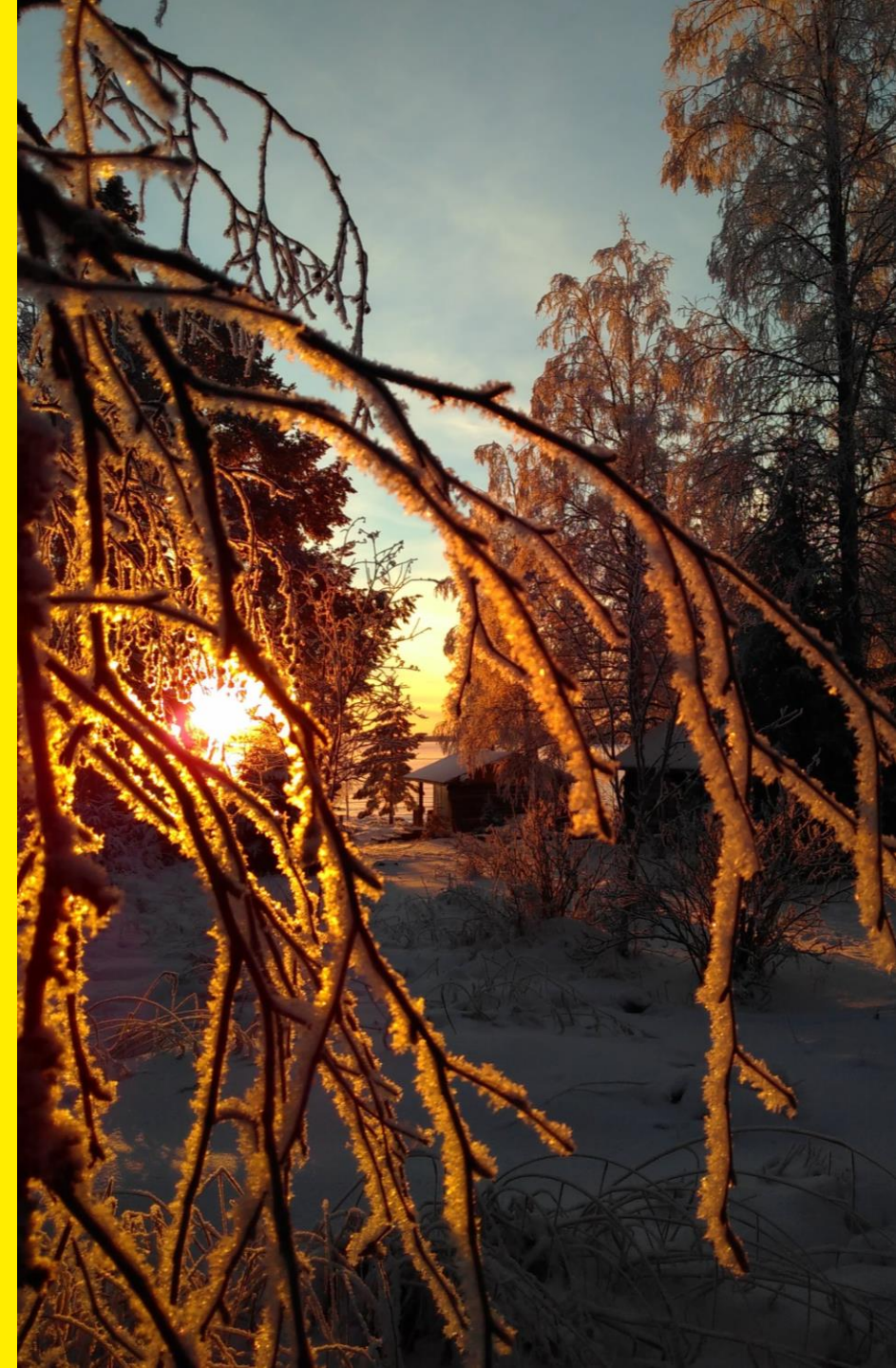
# Our aim is to:

- Spark conversation about the climate crisis
- Remind educators about their responsibility
- Strengthen the Ecosocial Approach to Well-Being in the everyday life and culture of schools
- Create learning materials and methods that incorporate a multidisciplinary approach
- Empower students to take action and develop resilience in the face of climate change
- Create a network that will promote the idea of a climate friendly and sustainable school



# The meaning of all this?

- Good life
  - Meaningful everyday life
- Better future
  - Future skills
- Ecosocial well-being
  - Well-being for environment and people





**So what do we do?**

**We have four lines of concrete action**

The educational structures and the attitudes towards climate change in schools is already changing – we're adding the speed.



## Four lines of action:

1. The Network of Climate Teachers
2. The Student Climate Panel
3. Online Climate Courses
4. The Cooperation between Universities and Upper Secondary Schools





# 1. The Network of Climate Teachers

- Update Upper Secondary School Teachers knowledge of climate change
- Create multidisciplinary teaching materials about climate change
- Prepare and assist teachers to develop and lead school climate projects in December 2020





## 2. The Student Climate Panel

- Create concrete actions in upper secondary schools and spread the word of sustainability
- Emphasise student active participation and resilience
- Get support from the students from University of Oulu and two University of Applied Sciences'





### 3. Online Climate Courses

- Build Moodle-based courses for the second degree
- Focused on a multidisciplinary approach to the climate crisis
- The pilot courses will begin in 2021
- Teachers and university students work together to create the content





## 4. The cooperation between Universities and Upper Secondary Schools

- Assist students make the transition from upper secondary school to higher education institutions
- Research collaboratively with the University of Oulu to learn about student's and teacher's attitudes towards climate change
- Collaborate with universities and climate networks





# "Ilmastojakso", a period dedicated for climate actions

- In December 2020, during the 3<sup>rd</sup> period in upper secondary schools, we'll implement
  - climate materials by teachers
  - projects by students
  - events, campaigns...
- **The change begins towards a permanent change in schools ...**
  - > **Climate action as a part of school's everyday life and teaching, structures and attitudes**



# Other events and campaigns

- *Hiiligrilli* (Coal Grill) in December 2020

Asking decision-makers difficult questions

- *Second Life Catwalk*, September 2020

Second hand fashion, sustainability of the clothing industry, mending clothes

- *Aineeton joulu* (Intangible Christmas)

Campaign about sustainable consuming



# Project principles on sustainability

- We aim to sustainability in e.g. travel, food and purchase choices in this project
  - Influencing the structures
  - The power of example
  - "Practice what you preach"





# Climate education in your school?

- Do you have climate education in your school?
  - Single lessons, only in some subjects, theme days or is it visible within school's culture?
- Is there cooperation amongst teachers when dealing with climate change?
- Is the whole school committed?



## **Part 2: The background**



**What are the biggest obstacles  
in climate education?**



## What are the biggest obstacles in climate education?

- Only for natural sciences teachers?
  - It's too difficult to talk about it?
  - Too much feelings?
  - Denialism?
  - Time? Money? Committed people?
  - ...
- 
- Tools for dealing with these?



Ministry of  
Education  
and Culture



# Our project helps schools in achieving e.g. these goals of the *new curriculum* of general upper secondary education

- Support the well-being of students
- Ensure the extensive general knowledge
- Assist the transition to further studies
- Provide cooperation with higher education institutions
- Include more studies across subject boundaries
  - 6 wide-ranging cross-curricular themes
- Aim for a sustainable future







## Other programs, strategies...

- UN Sustainable Development Goals
- The Finnish solution: Yhteiskuntasitoumus
- Oulu's program of sustainable development in education
- Eco-schools etc.





## Theories

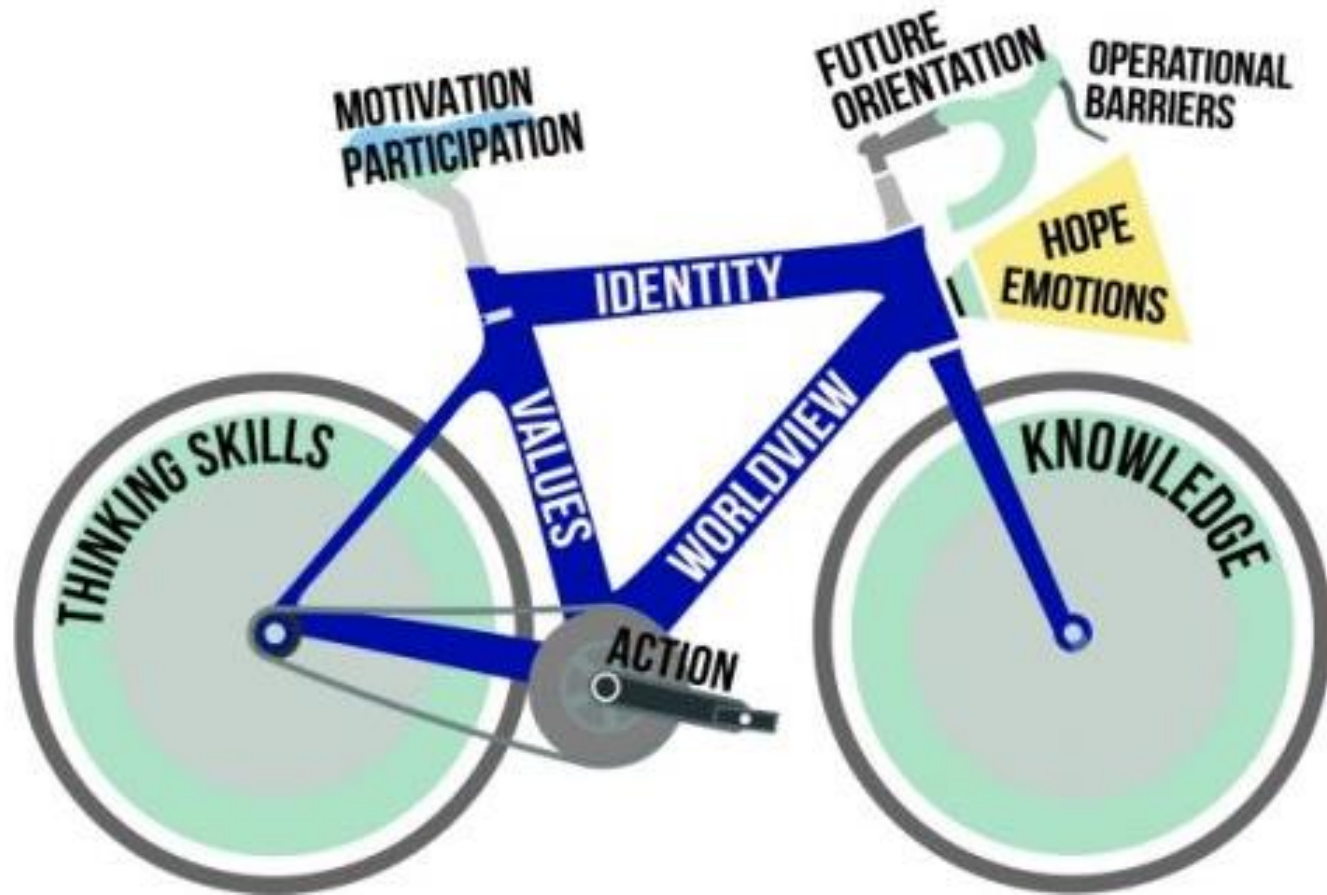
- Arto O. Salonen: An Ecosocial Approach to Well-Being
- Veli-Matti Värri: Education in the Age of Ecological Crisis
- Tolppanen, Aarnio-Linnanvuori, Cantell & Lehtonen. Bicycle Model on Climate Change Education
- BIOS Research Unit: Ecological reconstruction
  
- Pinja Sipari: Teacher's climate guide
- Panu Pihkala: Eco-anxiety and hope





## **Part 3: Pedagogy for a better future**

# Holistic climate change education?



- Are these dimensions visible in climate education you've seen?
- How could you implement these?

**Tolppanen, Aarnio-Linnanvuori, Cantell & Lehtonen. Bicycle Model on Climate Change Education**



# How do we rebuild our future?

- How do we change the anxiety to hope and action?
  - Youth, parents, teachers...
- What concrete actions can we do?
  - Obstacles – solutions – steps for action
- Active hope

“Hope is a verb with its shirtsleeves rolled up.” David Orr.



THE CLIMATE  
IS CHANGING  
WHY AREN'T  
WE?!



# Key words in climate education?





# Key words in climate education?

- Relationship to environment
- Meaningful and personal connections
- Learning and teaching together
- Different climate emotions to action
- Holistic approach
- Systemic change
- Planetary skills:
  - Resilience, problem solving, creativity, cooperation, active citizenship and participation

-> Ecosocial Well-Being



**The climate of tomorrow is  
made today.**





[www.ilmastonmuutoslukioihin.fi](http://www.ilmastonmuutoslukioihin.fi)

Instagram and Facebook

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# Thank you!

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# Some websites:

- Project website: <https://www.ilmastonmuutoslukioihin.fi>
- Finnish National Agency for Education: <https://www.oph.fi/en>
- Reform of the Curriculum: [https://minedu.fi/en/article/-/asset\\_publisher/esitys-uudeksi-lukiolaiksi-julki-vahvaa-yleissivistysta-tiivistyvaa-korkeakouluyhteistyota-ja-panostuksia-lukiolaisten-hyvinvointiin](https://minedu.fi/en/article/-/asset_publisher/esitys-uudeksi-lukiolaiksi-julki-vahvaa-yleissivistysta-tiivistyvaa-korkeakouluyhteistyota-ja-panostuksia-lukiolaisten-hyvinvointiin)
- <https://minedu.fi/documents/1410845/5394394/11+most+important+changes.pdf/df474839-9c46-4040-b339-0dbfa1bc0eae/11+most+important+changes.pdf>
- UN Sustainable Development Goals: <https://sustainabledevelopment.un.org/?menu=1300>
- Finland: Society's Commitment to Sustainable Development: <https://kestavakehitys.fi/en/commitment2050>
- Oulu's program for Sustainable Development: <https://www.ouka.fi/oulu/kekepolku/etusivu>
- Eco-Schools: <https://www.ecoschools.global/>



# Some websites:

- Arto O. Salonen: An Ecosocial Approach to Well-Being: <https://www.redalyc.org/pdf/4475/447544537003.pdf>
- Tolppanen, Aarnio-Linnanvuori, Cantell & Lehtonen. The Bicycle Model on Holistic Climate Change Education  
<https://researchportal.helsinki.fi/fi/publications/bicycle-model-on-climate-change-education-presenting-and-evaluati>
- <https://www.sirene.fi/blog/bicycle-model-on-climate-change-education/>
- BIOS Research Unit Ecological reconstruction : <https://eco.bios.fi/>
- Pinja Sipari: Teacher's climate guide <https://teachers-climate-guide.fi/>
- Panu Pihkala: Eco-anxiety and hope <http://ecoanxietyandhope.blogspot.com/>

