

# LEARNING STREAM

## FOR SUSTAINABLE FUTURE

Handbook for Oulu



KESTÄVÄN TULEVAISUUDEN  
**OPINVIRTA**



**OULU**

# Oulu is a city of sustainability learning

Sustainability and responsibility are at the heart of the city’s operations. They are part of the city strategy, and we are committed to national and international documents such as the 2030 Agenda for Sustainable Development. We must ensure that the words included in the strategies and programmes become reality for all Oulu residents, including the smallest ones.

Sustainability and responsibility are important elements on the path of lifelong learning and can only become relevant through action. All adults have a responsibility for future generations, and we must live as we teach. That is why we all need to tell the same story. Oulu’s Learning Stream for Sustainable Future brings together the themes we have identified as important to help us build a future of hope and meaning together.



Päivi Laajala  
Mayor of Oulu

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# There is hope

## Dear reader,

A sustainable future belongs to all of us. We can achieve it if our actions are guided by the limits of nature's resources and if we take future generations into account in our actions.

We can influence our future through a wide range of everyday actions, both as individuals and as members of a community. Most importantly, the promotion of a sustainable future must be an integral part of our daily activities. We don't have to know everything and there are no ready-made answers to all questions, but there are plenty of tools and operating models available! Oulu is already working towards a sustainable future.

Optimism, compassion and curiosity are key attitudes behind actions that will build a sustainable future. Curiosity increases knowledge and motivates action. Acting based on knowledge boosts realistic optimism and an optimistic atmosphere contributes to the wellbeing of us all.

Join the flow towards a sustainable future!

## Learning Stream for Sustainable Future

The three central themes of the Learning Stream for Sustainable Future are human-nature relationship, the circular economy and climate competence. Through these themes, the Learning Stream moves towards ecosocial education. Ecosocial education is born from and grows through learning.

We are all learners in the stream of a sustainable future, growing towards a sustainable way of life together.

The key themes of the Learning Stream concern us all. Instead of losing hope, however, we can take an active role and act. Action is based on interest and empathy towards nature and biodiversity: you want to take care of that which you value. And that is the goal of the Learning Stream: to care for the future of Oulu and the planet.

*"A sustainable future is one of the key focus areas of the education programme. We all have a duty to protect biodiversity."*

**– MIKA PENTTILÄ, DIRECTOR FOR EDUCATION AND CULTURE**

**THE HANDBOOK IS DIVIDED** into three themes. The first spread of each theme provides an introduction to the main perspectives and content of the theme, including its key concepts.

## The Learning Stream refers to:

- An attitude of continuous learning: values, skills and knowledge are learned at all ages from early childhood to adulthood
- Collaboration across different actors: breaking down silo mentalities so we can move forward together
- A common language: using shared terminology helps us discuss and promote sustainability together.

The stream flows towards a common goal, becoming more powerful the more we unite. Small streams grow into powerful rivers.

See the Learning Stream diagram on pages 6 and 7.

## Ecosocial education and drivers of future change

An ecosocially educated person refers to an active agent whose actions are based on the fact that they want to safeguard the ecological basis of life and the realisation of human rights. An ecosocially educated person thinks about sustainability from the perspective of a good future and is guided by the idea of safeguarding the integrity of human dignity and the diversity of ecosystems. Such a person is building a knowledge base for a circular economy based on the sustainable use of natural resources. Ecosocial education takes into account both the local and the global environment.

Ecosocial education is enshrined in the value base and operating culture of the national core curriculum for early childhood education and care, and the basic education curriculum. Building a sustainable future is one of the targets set for broad competences in the upper secondary school curriculum. Ecosocial education covers and brings together all subjects and all operators active in daycare centres and schools.

This handbook articulates and makes visible the targets set for children and young people, and shows the steps to achieve them. In these steps, all of us adults – not just daycare centre or school staff – have a huge role to play, both to set an example and to join the journey. Ecosocial education equips children and young people with the skills needed to function sustainably in their daily lives, and these skills become the more important the closer to independent living they come. In working life, ecosocially educated young adults will be the drivers of future change!

**THE HANDBOOK'S TARGET SPREADS** present cross-cutting sustainable future targets. The spreads illustrate how awareness and competence grow at different stages of the development process. They reveal the overarching and progressive nature of sustainable development.





# LEARNING STREAM for Sustainable Future

The Learning Stream for Sustainable Future takes us towards the know-how and lifestyle of a sustainable future. Shared goals encourage our collective learning. See the handbook for the Learning Stream for Sustainable Future at [ouka.fi/opinvirta](http://ouka.fi/opinvirta). Join the flow!

Early childhood education and care

Primary school

Lower secondary school

Upper secondary education

Adulthood



## STRENGTHENING HUMAN-NATURE RELATIONSHIP

We feel at home in nature and we value it.

Our human-nature relationship deepens into a human-environment relationship.

We start to act for the environment.

We expand our own opportunities to influence the common good.

Nature begins right outside your door.



## CIRCULAR ECONOMY

Recycling habits are a self-evident part of our daily lives.

We examine our own consumption choices and values from the perspective of a sustainable future.

We are proactive and understand the consequences of our actions.

We share our competence with each other and with future generations.

We value what we understand.



## CLIMATE COMPETENCE

Energy-saving choices are part of everyday life.

We know how to look at problems from a solution-oriented perspective.

We act locally but also seek to have an impact globally.

We practice what we teach and lead by example.

Our human-nature relationship deepens into a human-environment relationship.

recycling

empathy

ecological restoration

climate responsibility

circular economy

carbon footprint

eco-efficiency

biodiversity

natural resources

resource wisdom

sustainable consumption

connection to nature

carbon handprint

energy

cycle of matter

biosphere

wastage

climate change



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## Action improves the welfare of all

Targets set for children and young people cannot be achieved if adults are unable to improve their performance. Through our actions, we can convey to children and young people a hopeful but realistic vision of the future. Education for a sustainable future starts with the simple things in everyday life, meeting other people and empathy. If we feel empathy towards each other, we will learn to empathise with nature around us. When empathy and hope inspire our actions, we will also improve our own wellbeing.

Activities promoting a sustainable future are already visible in the daily lives of schools and daycare centres in Oulu in many ways. The children and young people interviewed for the handbook stated that they spend a lot of time outdoors to observe nature. Small deeds that benefit nature are part of children's daily lives, and they are particularly familiar with recycling, cleaning up the environment and reusing things. Pupils in primary and lower secondary school demonstrate knowledge of the concepts of a sustainable future and the ability to make connections. They also display a knack for identifying the Learning Stream targets and how these are reflected in their school life.

The responses from upper secondary school students emphasised the pervasiveness of sustainability in the school environment. Upper secondary school students would like to see themes linked to a sustainable future addressed more widely at school than just in individual courses. The upper secondary school students felt that the Learning Stream targets resonated with them, but they also felt that the greatest support and motivation came from discussions they had at home. The subject is not discussed enough or in an equitable manner at school: they criticised the unequal treatment of the theme of a sustainable future between subjects or even between teachers.

**THE HANDBOOK'S EVERYDAY ACTIONS-SPREAD** illustrates how the targets can be translated into daily actions, both small and large.

## Let's make strategies true together

Much work has already been done at the strategic level in Oulu to promote the sustainable future theme:

- **City of Oulu Environmental Programme 2026** has set ambitious sustainability targets. In particular, this handbook contributes to Target 4, We promote environmental liability.
- **In the City of Oulu Education Programme**, a sustainable future is one of the priority areas with the following identified targets: 1. Ecosocial education creates meaning and hope, 2. Sustainable development is at the heart of all activities and decision-making, 3. The sustainability learning path extends from early childhood education and care to higher education, and 4. Climate resilience and circular economy skills are a part of wise preparation for the future. The strategy also includes a service promise: we will build a sustainable lifestyle and a responsible community together.
- **The Oulu City Strategy Cultural Climate Change** strongly integrates sustainable future themes into all parts of the strategy. Oulu was also chosen as the European Capital of Culture 2026 under the same theme.

The strategies and the willingness to act are reflected in Oulu and a larger area as an increased emphasis on collaboration and extensive cooperation networks which daycare centres and schools can draw on to bolster their sustainable future skills. The strategies are integrated into this handbook which, together with the website, also offers plenty of tips and operating models for a sustainable daily life.

While we act locally, we can have a global impact. For example, mitigating climate change will improve wellbeing globally and prevent poverty and inequality. Thus, the goals of the UN's 2030 Agenda for Sustainable Development are also strongly linked to the Learning Stream for Sustainable Future, being present both in the targets and actions.

As individuals, we can and should make a difference, but the impact of actions we take together is even more powerful. That is why we need to be active in schools, workplaces and other communities. Together we are more.

**THE HANDBOOK'S SUPPORT SPREADS** the key operator for each theme from which you can get help and support for actions. A comprehensive collection of actors that offer support and support materials is included at the end of the handbook on pages 34-37.





*We feel at home in nature and value nature.*

# STRENGTHENING THE HUMAN-NATURE RELATIONSHIP



**A key element of sustainable education is the bolstering of children’s human-nature relationship and responsible behaviour in the environment, thereby guiding them towards a sustainable lifestyle and offering them ecosocial education. The aim is for us to learn to experience the world from multiple perspectives, grow to become global citizens, and extend ethical care to the living and non-living natural world and to present and future generations in addition to those close us.**

## **Cooperation can be used to strengthen children and young people’s human-nature relationship**

In Oulu, the goal of education for a sustainable future is an ecosocially educated Oulu resident who understands the impact of their own actions on other people, nature and society. Responsibility means caring for nature and promoting a sustainable lifestyle in a smart way. It means actions to ensure that future generations will also be able to make choices.

Strengthening children and young people’s relationship with nature is the key to ensuring that nature continues to be a resource for Oulu residents. A strong human-nature relationship is not innate but requires learning, which means that we adults have a huge role to play in supporting children and young people’s relationship with nature. We must lead by example: a motivating attitude and the example of an adult are the starting points for a child’s learning. We adults can succeed in this if we work together and are willing to learn ourselves.

## **Connection to nature is empathy**

One’s human-nature relationship includes one’s attitudes, behaviour, emotions and experiences related to nature. In the Western concept of nature, humans have often been seen as separate from nature, and the concept always reflects the current view on human’s place in the world. In ecosocial education, human welfare is understood to be dependent on nature.

In the development of a strong human-nature relationship, forming a connection to nature, i.e. seeing oneself as part of nature instead of separate from it is important. When your connection to nature is strong, you feel empathy for nature, as well as a desire to help and protect it. The desire to help leads to action. People who understand the value and significance of biodiversity as children often want to take action to conserve nature and ensure a sustainable future as adults.

## **Hunting for positive nature experiences**

The strengthening of one’s human-nature relationship requires learning, which starts during early childhood and care, and continues all the way through upper secondary education into adulthood. A positive human-nature relationship is built through exposure, which means that moving in nature, observing it and playing in it provide important nature experiences and strengthen the relationship. Anything you can do and learn indoors, you can also do outdoors.

The human-nature relationship also involves curiosity about the surrounding world. Observing and studying natural phenomena increases our understanding of biodiversity while teaching us to appreciate the variety of species, and the richness and diversity of nature. Understanding biodiversity is vital, and spending time in the forest with children and young people is an environmental act that will last well into the future.

## **Nature is everywhere, even in the city**

Nature is not just big forests and hard-to-reach places: it is everywhere, also in urban environments – you just need to open the door. Urban nature is more diverse than you might expect. Experiencing nature in an urban environment is also an important part of the development of the human-nature relationship, as it can help you understand the impact of human activities on the environment.

Although nature that starts at our doorstep creates a human-nature relationship in the city, urban nature is not enough to safeguard our wellbeing. We also need more and more protected nature on the planet. For the planet and for the wellbeing of humans, we need both green cities and the protection of wider natural areas.

## **A strong human-nature relationship benefits the whole planet**

Humans depend on the vitality of ecosystems, and this is a message we need to convey to children and young people. A strong and positive human-nature relationship created in childhood often carries you through life, in which case a responsible attitude towards nature and the environment is more strongly reflected in everyday choices and activities in adulthood.

### **TERMINOLOGY**

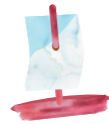
- **Biodiversity**= Life in all its forms. Stopping the degradation of nature is about protecting life. **Source: Janne S. Kotiaho, Ilari E. Sääksjärvi**
- **Human-nature relationship**= A person’s way of relating to nature, and their thoughts and attitudes about nature.
- **Empathy**= A person’s ability to imagine themselves in the place of another (person, group of people, an animal or nature).





# Targets

*Early childhood education and care*



*Primary*



*Lower*



*Upper*



*Adulthood*

## **We feel at home in nature and we value it.**

The human-nature relationship develops gradually through getting to know nature and biodiversity. A budding human-nature relationship evolves into a conscious one based on knowledge and experiences.

- We understand that we need nature and start to appreciate it.
- We are curious and wonder about nature and the things occurring there.
- We learn to move in nature.
- We dare to feel a wide range of emotions in nature.
- We do small good deeds for nature in our daily lives.
- We learn to observe nature with all our senses.

## **Our human-nature relationship deepens into a human-environment relationship.**

The budding human-nature relationship becomes more complete. New dimensions of learning emerge alongside interest and curiosity. The aim is to create a solid environmental relationship that already includes a clear understanding of causality.

- We want to take action to benefit the environment and our appreciation for nature becomes more embedded.
- We want to explore, experiment and know more.
- We understand the basic concepts of biodiversity and our understanding of causality begins to improve.
- We know our rights and responsibilities when moving in nature and know how to act accordingly.

## **Our human-environment relationship becomes deeper.**

Little by little, the environment relationship deepens into a sustainable human-environment relationship and the knowledge base grows. The aim is to activate young people to act in their community and influence the development of their local environment.

- We understand that nature and humans are inseparable. Our human-nature relationship deepens into an appreciative human-environment relationship.
- We understand that nature is all around us and that our behaviour in the built environment can also have an impact at the ecosystem level.
- We are able to incorporate species learning, among other themes, to the concept of biodiversity of organic and inorganic nature.
- We start to act for the environment in our own lives and in our immediate environment, and also start to make a difference in our communities.

## **We start to act for the environment.**

The human-environment relationship evolves into a sustainable way of living and making choices. The young person and adult actively promotes the environment and strives to influence their community's social decision-making and actions.

- We understand that all life is precious and that everyone has a place in the ecosystem.
- We are aware of our role as an influencer and see our actions as meaningful.
- We understand the systemic character of nature and the importance of the biosphere: our reasoning and research skills are improved.
- We actively seek to protect the biosphere, both in our daily activities and as a community, by seeking to influence social issues.





# Daily actions

## Commitment from the adult

I will set an example for learners. Through my actions, I will strengthen the learners' human-nature relationship and responsible actions in the environment, guiding them towards a sustainable lifestyle.

**I PROMISE**

**TIME:** I will find time for us to strengthen our human-nature relationship in our daily lives. Local nature is both a learning destination and a learning environment for people of all ages.

**MEANINGFULNESS:** We will wonder about phenomena in nature together, because wonder leads to realisations. We will explore causality in nature and apply what we learned in outdoors in nature to all subjects.

**SENSE OF COMMUNITY:** We will act together in our environment, gaining experience and knowledge to act on behalf of the environment. By my example, I will motivate and encourage others to conserve natural resources.

**HOPE:** I will help people to see themselves as a cherishing part of nature. I will help people to see the importance of nature for our wellbeing.

### Berry and mushroom picking as cultural capital

Berry and mushroom picking are traditional skills, and passing them on strengthens not only the human-nature relationship but also cultural skills. With the growing importance of locally produced food on our plates, the importance of skills involving sustainable use of nature is even more pronounced.

## Actions and activities

Concern for the environment and the future should be channelled into empowering activities. For example, schools and daycare centres are micro-societies where we can practice ecosocial education skills. They also allow us to learn communality and influencing skills. The ability to notice and explore our own community will help us to act responsibly as adults.



### Small actions

- We will spend time in nature. We will enjoy and rejoice in nature around us. We will learn about biodiversity by identifying plants and animals in our immediate environment.
- Adults being present and listening encourages children to wonder, explore and discover.
- We will go outside to learn whenever possible, using outdoor learning with an open mind.



### Medium-sized actions

- We will make the promotion of the human-nature relationship a valued part of our operating culture. We will emphasise its importance for our wellbeing and resilience.
- We will cherish our environment and actively promote its best interests by, for example, participating in restoration projects or fostering sustainable traditions.
- We will add practices that conserve nature in the documents that guide our activities.
- We will choose a nature site in the local area and observe its life in all seasons, preferably for several years.



### Large actions

- In all our activities, we will promote the learners' responsibility and understanding of the impact of their actions on other people, the ecosystem and society.
- We will take a stand and influence international activities to improve the human-nature relationship and to care for nature.
- We will make sure that the operations of our unit do not degrade nature either locally or globally.





*"Let's go to the forest, it's nice there!"*

# Support for strengthening the human-nature relationship

## Wellbeing through sustainable education

Diverse nature experiences support children's healthy and sustainable lifestyles and wellbeing. Playing and learning in nature creates a basis for strengthening a child's positive human-nature relationship, and experiences of success and the ensuing sense of accomplishment develop the child's positive self-image and bolster their self-esteem. Time spent in nature has been shown to improve wellbeing.

Early childhood education and care in Oulu partially takes place in local nature. For example, according to the Puoli päivää pihalla (Half a day outside) model, children go on excursions, spend time outdoors and learn in a variety of environments. The local environment supports different learning goals and provides content for the children's activities: watching, wondering, asking questions, exploring and discovering. Even a small adventure will unleash the imagination. Nature provides the best possible environment for promoting the wellbeing and learning of all children.

## Key support posts

### Alakööki

#### EARLY CHILDHOOD EDUCATION AND CARE

Alakööki acts as a promoter, expert, discussion facilitator and educator in sustainable education. The aim is to strengthen children's human-nature relationship and raise awareness among the staff so that sustainable education will be part of the operating culture of the daycare centre or family day care provider.

Alakööki organises activity paths based on storytelling and experiences in the immediate vicinity of daycare centres, for example. By participating in these activities, children can learn about the environment and how to cherish it. The activities are also educational for the staff through their participation and actions. The activities organised by Alakööki are seamlessly integrated into the objectives and content of the national core curriculum for early childhood education and care and the national core curriculum for pre-primary education. The activities are based on residence in Oulu, knowledge, inclusion, joy and positivity.

### Heikiharju Nature Shelter

#### EARLY CHILDHOOD EDUCATION AND CARE

At the Nature Shelter, nature education is deepened and realised through the STEAM pedagogy. The Nature Shelter organises experiential and experience-based activity paths in the immediate vicinity of early childhood education and care units and the Nature Shelter, and workshops in the Nature Shelter's Oivaltamo. By participating in these activities, both children and staff can gain positive experiences and knowledge about nature and how to act in nature by doing, exploring and discovering things for themselves.

### Timosenkoski Nature School

#### PRIMARY SCHOOL

The aim of the Nature School is to support teachers' environmental education. The core idea is that a school day at the Nature School is part of the activities of the class - not a separate excursion day but a day spent there when the topic is relevant for the class. A strong link to the national core curriculum connects the themes of the Nature School to other school activities: once the class has learned the basics at their regular classroom, the Nature School provides experiences related to the theme so that the theme can be revisited in the classroom after the field trip. This is how the class will get the most out of the field trip.

The Nature School also has a social dimension: doing things together is almost always possible in nature. Nature inspires exploration, but being in nature also helps you to concentrate and calm down.

**For more support for activities, see pages 34-37 of the handbook.**





*We examine our own consumption choices and values from the perspective of a sustainable future.*

# CIRCULAR ECONOMY

The circular economy is one aspect of sustainability, born out of the need to replace our current throwaway culture. Planetary wellbeing requires living within the limits set by natural resources. We should learn to find happiness in moderation rather than consumption, and in sharing rather than owning.

## Our common mission: reducing environmental load

The Oulu City Strategy has set the following goal: Oulu will be Finland's best learning circular economy city by 2030. A city is made up of its residents, which means that Oulu can become **the best learning circular economy city in Finland** only if the residents are ready for it. A sustainable future will be built with circular economy skills, which means that we all need to be ready to learn resource wisdom, environmental responsibility and a new way of

thinking concerning things such as ownership. We need a change of attitude and actions!

Strong circular economy skills ensure that we can continue to operate in an economically viable way while taking care of the planet. Our mission is to grow ourselves and raise children and young people to become experts with a strong value base for a sustainable future and the knowledge and skills needed to influence the state of our living environment so that they can pass the relay baton of a better future to the next generations.

## Zero waste, plenty of wellbeing

The circular economy aims to reduce the burden on the environment through various means, and existing materials and products are utilised in the best possible way (**resource wisdom**). Materials and products are kept in the economic cycle for as long as it is possible to do so without the items losing their value, and recycled whenever possible. This minimises the amount of waste.

A circular economy that is functional from the perspective of individuals and communities means avoiding buying anything new, reducing buying, reusing and recycling. In turn, this means a new kind of attitude to ownership and consumption, a growing sense of community and improved wellbeing. It means a move towards **a sharing economy**.

## Sharing economy and responsible consumption

The sharing economy is a way of thinking in which the ability to use goods and services when needed is more important than owning them. We can practice **responsible consumption** as individuals and as communities. In practice, this can mean sharing equipment and facilities, being reasonable and thrifty in terms of purchases, repairing and recycling things, and reusing materials.

Through sustainable education, we adults can promote the value base of a sustainable lifestyle at an age-appropriate level, starting from early childhood education and care. If we succeed in this work, responsible consumption will become more and more visible in the actions of individuals and different communities, workplaces, daycare centres and schools.

## Our only planet needs circular economy experts

At the current rate, the planetary boundaries will soon be reached, and in many aspects, we have already exceeded the limits that threaten the stability of the Earth's systems. There is still plenty of hope, however, because if we do things right today, we will raise ourselves and future generations to be responsible circular economy experts.

Circular economy skills are important for the future of not only Oulu, but the entire planet. If we want to keep the planet viable for future generations, we need circular economy experts to combat climate change, ensure the sufficiency of natural resources and preserve biodiversity.

## TERMINOLOGY

- **Resource wisdom**= The ability to use different resources (e.g. natural resources, raw materials, energy) prudently and in a way that promotes wellbeing and sustainable development.
  - **Sharing economy**= Sharing, borrowing or renting goods instead of owning them.
  - **Overconsumption**= Consuming more than is sustainable within the limits of the planet.
  - **Planetary wellbeing** = A state in which our planet as a system and its processes remain in such good condition that species and populations can survive into the future and living things have a chance to thrive.
- Source: University of Jyväskylä. Wisdom community; Kortetmäki, T. et al.**



# Targets

~~~~~ **Early childhood education and care** 

**Recycling habits are a self-evident part of our daily lives.**

Circular economy skills are developed gradually, starting from the experience of a happy, meaningful and affordable daily life. The meaningfulness and reasonableness of life are central, guiding and clearly explained concepts in a child's daily life. Meanwhile, awareness of the link between recycling, the circular economy and nature conservation starts to emerge.

- We learn the basics of sustainable consumption as part of our daily activities.
- We observe the environment and human activity in it.
- We learn about recycling from the waste sorting perspective and identify different types of recyclable materials.
- We know how to take care of our play environment.

~~~~~ **Primary** 

**We examine our own consumption choices and values from the perspective of a sustainable future.**

The understanding of the link between circular economy skills and a sustainable future will gradually deepen. Moderation, resource wisdom and individual choices will be integrated into the circular economy skills.

Awareness of the importance of one's choices and an ideology to avoid consumption will begin to develop and show in one's everyday choices and interactions.

- We understand the role of the circular economy in achieving a sustainable future.
- We learn to think before we buy and understand why it makes sense to co-own, reuse and repair things.
- We learn how to identify, recycle, sort and reuse different materials.
- We learn about raw materials and how much of them are needed for different products.
- We take good care of our own and shared belongings.

~~~~~ **Lower** 

**We examine our own consumption choices and values from the perspective of a sustainable future.**

Circular economy skills are part of a sustainable lifestyle, an understanding of the finite nature of resources. In addition to the knowledge base, young people will be encouraged to play an active role in their community. Resource wisdom will be considered from the perspective of individuals, groups and society as a whole. The ideology of avoidance and the search for meaning from things other than matter will be emphasised.

- We learn to look at the impact of our choices at different levels.
- We understand the impact of our choices both for our own wellbeing and for nature.
- We broaden our knowledge of sustainable solutions.
- Through our choices, we reduce our environmental load.
- We become more active in our own neighbourhood.

~~~~~ **Upper**  ~~~~~ **Adulthood**

**We are proactive and understand the consequences of our actions.**

The circular economy skills will support the young people in sustainable living and making sustainable choices. They will act resource-wisely on their own initiative and have a broader understanding of the consequences of their choices. Reasonableness becomes an internalised attitude. The young people believe in their own potential to make a difference, especially in their own community, and know how to actively promote a sustainable way of life based on the circular economy.

- We act responsibly in our local environment.
- We understand the consequences of our choices.
- We deepen and broaden our understanding of different circular economy themes.
- We influence and act at many levels: home, school, city, hobbies.



# Daily actions

## Commitment from the adult

I will set an example for learners and share my knowledge to support the whole community. Through my activities, I will strengthen the learners' circular economy skills and guide them towards a sustainable lifestyle.

**I PROMISE**

**TIME:** Making the principles of the circular economy part of your daily life takes time, but it is necessary in the best interest of the planet.

**MEANINGFULNESS:** By my own example, I will try to shift attitudes from consumerism to sustainable choices and lifecycle thinking. Happiness comes from meaningful things and good deeds.

**SENSE OF COMMUNITY:** I will encourage my community to reduce waste and save materials. I pledge to promote the sharing economy and co-ownership in my daily life and to advertise the circular economy themes.

**HOPE:** I recognise the limited nature of natural resources and am optimistic about building a sustainable lifestyle. By acting together and making responsible choices, we can build a sustainable future.



## Actions and activities

Concern for the environment and the future should be channelled into empowering activities. For example, schools and daycare centres are micro-societies where we can practice ecosocial education skills. They also allow us to learn communality and influencing skills. The ability to notice and explore our own community will help us to act responsibly as adults.



### Small actions

- Together, we will create recycling rules to which everyone can commit.
- We will reflect on the necessity of small purchases and responsible consumption together.
- We will repair and refurbish everyday objects and use recycled materials imaginatively and appropriately.



### Medium-sized actions

- We will monitor and actively reduce food waste.
- We will make the circular economy a natural part of our operating culture and work with circular economy operators.
- We will only choose products that are responsible and sustainable in their entire lifecycle and promote the sharing economy in the local area.



### Large actions

- We will incorporate the circular economy principles as a self-evident part of working life skills.
- We will influence local and national decision-makers to promote the circular economy principles in structures (e.g. procurement, energy production such as solar panels, inclusion and activism, cross-generational expertise).
- We will make bold choices to be a responsible player in the global circular economy.



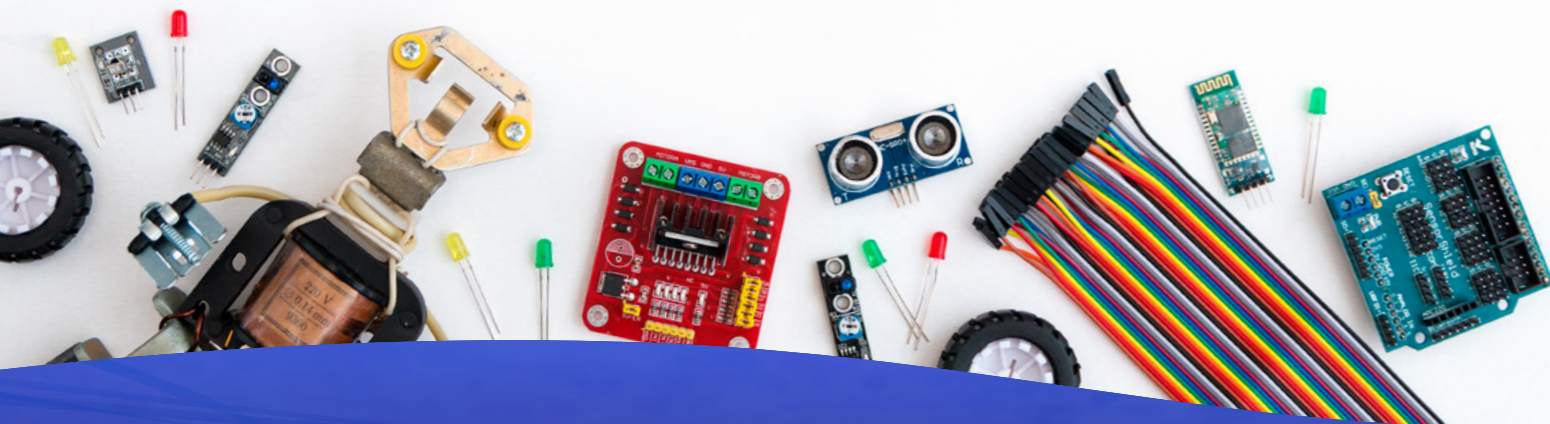
# Support for the circular economy

## STEAM as a sustainable development tool

STEAM creates motivation, meaning and functionality in learning. It can be applied to a wide range of topics, including a sustainable future. As a method, STEAM emphasises collaboration, which can take place across subject and class boundaries, but also with the surrounding society such as businesses. STEAM can be implemented all the way from early childhood education and care to upper secondary education. Oulu aims for STEAM to become a tool for all Oulu residents and a network for urban development.

STEAM contributes to a sustainable future. For example, it is important to take into account the circular economy viewpoint. When prototypes are designed, recycled materials are used whenever possible and care is taken to ensure that the prototypes can be dismantled and recycled afterwards. Even in everyday activities, paying attention to minimising waste is important.

The STEAM pedagogy emphasises creative collaborative problem-solving, innovation and project-based learning. An investigative and entrepreneurial approach plays a key role. Technology can be used at different stages of a project, especially in the final stages, but it is not at the core of it. STEAM can be used to find solutions to future problems and global challenges such as poverty, affordable and clean energy, or climate change. It is easy to integrate the UN 2030 Agenda for Sustainable Development goals to the activities.



## Key support posts

### Kiertokaari

Kiertokaari's vision is to be a promoter of a sustainable circular economy and an active player in the municipality, and it plays an important role in sharing up-to-date information. Kiertokaari organises visits to schools and daycare centres, and is also happy to come to events to talk about the circular economy. Kiertokaari encourages schools and daycare centres to get in touch!

*“Every action and decision that contributes to a sustainable future is meaningful. The circular economy is the future, and we can influence the future through the circular economy. Let's work for the future together.”*

- MARI JUNTUNEN, SPECIALIST AT KIERTOKAARI

### Guide to the circular economy in schools

**Opas koulujen kiertotaloutteen** (Guide to the circular economy in schools) explains circular economy issues in an easy-to-understand way to support teaching and provides teachers with tools for dealing with the circular economy in different subjects. The guide also highlights ways in which school staff can get involved in the promotion of the circular economy and make the school's activities more environmentally friendly. You will also find tips for cooperation between different organisations and examples of local places linked to the circular economy to visit!

The guide to the circular economy in schools has been produced by Oulu City Educational and Cultural Services and published by Kiertokaari Oy.

### Circular economy roadmap

The City of Oulu has prepared a circular economy roadmap as part of the implementation of the environmental programme. The roadmap was prepared for the City of Oulu, and it looks at the circular economy from the perspective of the city organisation: what measures the city can take to promote the circular economy in Oulu. But everyone is needed for the work on the circular economy: businesses, educational institutions, research organisations, other stakeholders and local residents. Building the best learning circular economy city requires cooperation!

**For more support for activities, see pages 34–37 of the handbook.**





*The young person starts to act for the environment.*



# CLIMATE COMPETENCE

Climate change is a huge global problem, and many people feel that they are not equipped to deal with it. But all solutions to problems, even on a global scale, start from local action and the decision of individuals to contribute to the common good. We are all links in a big chain, and every link counts. As a result, the planet is warming faster than ever, and studies show that global warming has already caused some irreversible changes. Rising sea levels and changing weather patterns are making our planet uninhabitable in places.

## Each of us can make a difference

The City of Oulu is determined to be carbon neutral by 2035. To reach the goal, practical action and varied cooperation from all of us is required. If we use our strengths for good and join forces, our actions will become powerful and meaningful. All everyday actions matter in climate change mitigation, even the small ones.

According to studies, about a quarter of Finns suffer from climate anxiety, and a sustainable way of living has been found to

be the most effective remedy for managing these difficult emotions. The primary problem to be solved is therefore not climate anxiety, but insufficient action to reduce emissions. So why not change our daily lives towards a cleaner and more meaningful life that promotes wellbeing?

## Extensive, rapid, partly irreversible

Without the greenhouse effect, we would not have the diversity of life on Earth that we have today. However, the greenhouse effect

has intensified as the amount of greenhouse gases (e.g. carbon dioxide) in the atmosphere has increased as a result of human activity.

Climate change is already visible in Oulu, too. For example, the duration of the ice winter in the Bay of Bothnia is estimated to shorten by about a week due to rising temperatures, and the ice cover is expected to get 6–7 cm thinner per decade. Windy conditions also make the ice conditions challenging, making it difficult to navigate and hampering many livelihoods. Luckily, solutions already exist. All we need is a collective nudge towards a cleaner future. Every tonne of carbon dioxide not released into the atmosphere is important!

## Cooperation and understanding instead of preaching

We should all reflect on our own feelings about the major issues of our time such as climate change or biodiversity loss, because our background and emotions influence what we say and how we act. We should keep in mind that no matter how smart you are, your mind or life situation can prevent you from doing what you perceive to be right.

Talking and listening to others are skills we should learn, both with children and young people and among adults. Looking at the issue from several perspectives will help both us and others to find the path towards sustainability. As adults, do we have the courage to admit when discussing the issue with children and young people that we are also affected by the global problems? Could we use these concerns to find the strength to change things for the better, while also finding hope and courage in what we have already done?

## Climate action in my community

When we live a life in line with our values, our wellbeing will improve. This means that we will have the resources needed to influence society, and we can do things such as persistently strive to change structures to support sustainability and wellbeing. Heating, transport, food and other forms of consumption are the key in the emissions reduction of both individuals and society. Would a debate on the different roles in the community be appropriate? Everyone will find their responsibility.

The greatest burden of humanity's environmental impact falls on young people and future generations. It is important to hear the views, attitudes and wishes of young people on climate issues – and also to act. Although we cannot know what the future holds, a sustainable way of life will bring meaning to our lives and contribute to our wellbeing.

## TERMINOLOGY

- **Energy wisdom**= Less carbon emissions and more energy efficiency, e.g. a low-emission built environment where measures to combat climate change are in place.
- **Ecological restoration** = Rebuilding society based on ecological boundaries to achieve ecological, social and economic sustainability.
- **Climate education**= One aspect of environmental, sustainable and ecosocial education. Related areas of education include civic, global and human rights education, as well as future and media education.
- **Carbon handprint**= An individual's actions that help reduce the carbon footprint of others.





# Targets

## Early childhood education and care

### Energy-saving choices are part of everyday life for us.

Climate competence gradually increases through an understanding of the different forms of energy and common actions to save energy. The link between energy, the cycle of matter and nature conservation starts to emerge.

The aim is to gradually evolve from observing energy in one's daily life to active energy-saving and moderation-conscious behaviour with an emphasis on working together. Identifying the emotions and thoughts triggered by a moderate lifestyle.

- We are optimistic about acting to benefit nature.
- We learn responsibility as part of our daily lives: for example, we value food and save energy.
- We are heard, and we know that we have an opportunity to make a difference.
- We learn about energy: what it is, where it is consumed and where it is created.
- We reflect on and study weather phenomena: whether it is always snowy in winter and what kind of extreme weather phenomena there are.

## Primary

### We know how to look at problems from a solution-oriented perspective.

Climate competence becomes deeper and the learner learns to integrate it into skills for a sustainable future and the resulting wellbeing. General understanding about emissions in daily life increases, i.e. an understanding of the scale of emissions from different activities and products.

The aim is to broaden the learner's own role as a consumer in relation to global problems, their causes and consequences, as well as their role in local solutions. Practising constructive discussion and identifying emotions about challenging topics.

- We believe that our actions have an impact on sustainable living.
- We strengthen our thinking skills, and practice moving from a problem-oriented to a solution-oriented approach.
- We understand the basics of energy production.
- We strengthen our understanding of how local causes can lead to global problems and, on the other hand, how local solutions can have a global impact.
- We take ambitious but gentle climate action in our daily lives.

## Lower

### We act locally but also seek to have an impact globally.

Learning to recognise and see climate competence as a strength in building a prosperous future. The general understanding about emissions extends beyond one's own daily life to various activities in society and the opportunities to influence them.

An understanding of one's possibilities of influencing both one's own daily life and global phenomena develops through familiarisation with local structures. Self-knowledge and interaction with others also develop in relation to global phenomena.

- We can appreciate intangible things in addition to material ones.
- We practice dealing with challenging emotions, and a realistic hopefulness underpins our active attitude.
- We begin to independently link what we are learning to social issues, and start to perceive the scale of climate action.
- We understand that the community is at the heart of any change. We work in our own community to promote change.

## Upper Adulthood

### We practice what we teach and lead by example.

Climate competence is developed by understanding different perspectives and working together. The climate crisis is seen as a global environmental crisis, but solutions are identified and actions to implement them are taken, recognising the limits of one's own opportunities.

The systemic nature of climate change and the inevitability of ecological restoration become apparent. Awareness of one's own responsibility as part of the chain of generations grows, and actions grow with it. The learner learns to see challenging emotions as a resource.

- We see environmental protection as a value in itself, and we want to act locally and have a global impact.
- We identify changes caused by climate change in local nature, society and the world.
- We broaden our climate competence from the viewpoint of ecological restoration, and our understanding of the scale of climate action deepens.
- We are growing in our role in the change of our community towards a sustainable future, and we strengthen our own agency.

# Daily actions

## Commitment from the adult

**I will set an example for learners. I will strengthen the learners' climate competence and encourage them to act locally and have a global impact.**

### I PROMISE

**TIME:** I will justify and explain to the learners why we do what we do. Climate responsibility is part of everyday life. We are all responsible for it, and it should be reflected in all learning.

**MEANINGFULNESS:** I will give the learners the experience of knowing that their actions have an impact on the sustainable lifestyle. The link between concrete action and climate change mitigation starts to emerge.

**SENSE OF COMMUNITY:** The commitment of all staff is important, so I will do my part to promote the theme of a sustainable future in my work community. I will actively involve the learners in climate action, teaching them sustainable consumption habits and ways to increase their carbon handprint.

**HOPE:** In my daily life, I will set an example in enthusiastic climate action without laying any blame. I will inspire hope that by working together we can have a global impact.

## Actions and activities

Concern for the environment and the future should be channelled into empowering activities. For example, schools and daycare centres are micro-societies where we can practice ecosocial education skills. They also allow us to learn communality and influencing skills. The ability to notice and explore our own community will help us to act responsibly as adults.



### Small actions

- Habits that protect the climate are verbalised and become part of daily life.
- We will make the goals, content and methods of climate and sustainability education visible to all, including parents. We will also communicate them externally.
- We will make climate-friendly options clearly visible to the learners in a solution-oriented way at school during mealtimes and when moving about, for example.



### Medium-sized actions

- We will find ways to act locally and contribute to the preservation of carbon sinks in the immediate vicinity of the school.
- We will boldly introduce climate action of all sizes into discussions at joint events, among the staff and in educational situations.
- We will choose devices that have the lowest possible lifecycle impact.
- We will use comparisons to make the scale of climate action visible to the learners.
- We will set an example for others.



### Large actions

- We will make the many forms of social action easy to grasp and introduce activism as a positive phenomenon.
- We will review successful local and global environmental actions that create hope for action.
- We will pay attention to sources of major emissions in our daily lives. We will also actively influence them by contacting decision-makers and service providers.
- We will develop international action that respects the limits of climate and natural resources, both within our own operations and more extensively.





# Support for broadening climate competence

## Entrepreneurship education as a driver of climate competence

The knowledge, skills and attitudes of children and young people on the building of a sustainable future can be bolstered with entrepreneurship education methods. The key to climate competence is moving from a problem-oriented to a solution-oriented approach and broadening the means of influencing matters. These targets are also supported by the strengthening of entrepreneurial and other working life skills. The importance of sustainability skills is especially pronounced in working life.

In functional entrepreneurship education courses, circular economy skills and climate competence are bolstered by linking them to real-life examples and the building of the learner's own future. In these courses, entrepreneurship is used as a way of solving problems together while learning about the operations of businesses and organisations from a sustainability perspective.

Entrepreneurship education is a good way to approach climate competence and circular economy skills. What they have in common is a mindset that emphasises aspects such as a multidisciplinary approach, openmindedness, boldness and problem-solving skills.

## Key support posts

### Repair Manual for Schools emphasises the power of community

A prosperous school community that lives within the limits set by the planet can be largely achieved through individual choices, but collective measures to improve the structures of schools and the community culture are especially effective. **Repair Manual for Schools** is a freely available online guide from Oulu that can help in making your school more climate-friendly. **Repair Manual for Schools** emphasises the changes we can make in our communities. It contains information, actions and materials for upper secondary school students.

The manual includes tips on how to target climate actions of different sizes to different actors in the school based on age and level of responsibility.

#### Examples:

- Food: identifying the share of climate-friendly food, improving its availability in the cafeteria; monitoring waste and consumption, and utilising the results obtained.
- Motion: enabling and encouraging the use of low-carbon modes of transport; creating emissions inventories for school trips and reducing the emissions, taking advantage of the local environment and community involvement.
- Infrastructure: moderate use, the need for procurement, digital solutions and emissions inventory; the school infrastructure as a learning environment.
- Emotional climate: working on emotions and interaction, dialogue and argumentation, history and envisioning lessons.

Distinguishing between climate actions of different sizes is important. In upper secondary school and when dealing with adults, resources should be allocated for actions that will significantly reduce emissions. The lack of recycling bins in the school corridor should not prevent more effective climate actions such as adding more low-carbon food to the menu or requiring the use of renewable energy in the school.

The manual also calls for a change of operating culture. The words in curricula and strategies should be transformed into collective actions, and the actions should be advertised so that the enthusiasm and hope generated by action would spread outside the community.

*We need small everyday climate actions to promote our wellbeing. We need community climate actions to change structures and share hope. We need leaders and decision-makers to enable the change.*

**- PAULA RATAVA, SUSTAINABLE DEVELOPMENT TEACHER**

**For more support for activities, see pages 34–37 of the handbook.**



# Support posts

## Finding support for everyday actions

The Learning Stream for Sustainable Future is supported by a strong multidisciplinary network. All the operators in the network contribute to the achievement of the common goal through their specific skills and strengths. They offer a wide range of support for the different themes of the Learning Stream: some produce materials, others offer sites to visit or guided tours, and some influence through the wider network.

Here is a list of key operators supporting the sustainability work in daycare centres and schools. Always remember to prepare for joint meetings in the agreed manner and be flexible in terms of schedules, for example, so that the cooperation will go as planned.

### HERE'S WHAT YOU CAN DO:

- Look at what is on offer and think about where you need support. Broaden your thinking – a visit to the forest can offer benefits other than just species learning: you can practice emotional and social skills, for example. Many of the operators offer ready-made packages. All operators encourage you to contact them so that you can think together about what kind of cooperation could be arranged.
- Prepare with care: Prepare the learners for the visit. For example, on a nature tour the guide only has a brief moment to arouse the learners' fascination and curiosity. This can be facilitated by reflection beforehand and reminiscence afterwards.



## Operators in the City of Oulu

Various parties support the Learning Stream for Sustainable Future in their daily work. Contact them if you want to improve the operations of your unit and your own actions.

### Key operators in the Learning Stream for Sustainable Future

Operators from the Oulu City Educational and Cultural Services help the units in their sustainable future work, act as a link to the city organisation, and implement the city's strategy and education and environmental programmes.

- Learning Stream for Sustainable Future management team
- Persons in charge of sustainable future work (daycare centres and schools)
- Educational and Cultural Services' sustainable future teachers
- Ecology support persons
- Reppu and Rinkka working groups

### The city's permanent operators

These are the operators closest to daycare centres and schools that provide ongoing activities and support.

#### Alakööki

**EARLY CHILDHOOD EDUCATION AND CARE**

For more information, see p. 17

#### Timosenkoski Nature School

**PRIMARY SCHOOL**

For more information, see p. 17

#### Heikinharju Nature Shelter

**EARLY CHILDHOOD EDUCATION AND CARE**

For more information, see p. 17

### Other operators in the City of Oulu

#### Youth Services

Involving children and young people, working together, collecting information, promoting equality, network cooperation, space booking, subsidies.

#### Property and Facilities Management Services

Property and Facilities Management Services build and maintain the city's service buildings and arrange the necessary catering, property maintenance and sanitation services. The unincorporated county enterprise also provides caretaker and transport services, and maintenance services for indoor sports facilities.

#### Libraries

Source criticism and up-to-date information, communication and education in library facilities, information packages on different topics for people of different ages, themed events, information retrieval lessons.

## Additional information, links and learning environments

### Learning Stream for Sustainable Future -website [OUKA.FI/OPINVIRTA](https://ouka.fi/opinvirta)

The website includes up-to-date information on the Learning Stream and links and tips on the themes of this handbook, e.g.

- The Puoli päivää pihalla (Half a day outside) project **EARLY CHILDHOOD EDUCATION AND CARE**
- 2030 Agenda for Sustainable Development in early childhood education and care **EARLY CHILDHOOD EDUCATION AND CARE**
- Components of a sustainable everyday life  
Components of a sustainable everyday life poster (pdf)
- Opas koulujen kiertotalouteen (Guide to the circular economy in schools) **ALL**
- Repair manual for schools **UPPER SECONDARY SCHOOL**

Interested? Contact the Learning Stream for Sustainable Future working group via the website. You can also access other existing materials from Oulu through the website such as:

- STEAM in Oulu materials **ALL**
- Entrepreneurship education path **ALL**
- Cosmopolitan's path 2021 **ALL**

See national materials in the environmental education material bank at [www.mappa.fi](http://www.mappa.fi). You can search for the tasks, information or events you need.

### Learning environments

#### Local nature and outdoor learning

Nature begins right outside your door.

#### Museum and Science Centre Luuppi

Luuppireitti route and culture trail, Luuppi's culture and science education programme for schoolchildren, a nature exhibition

#### Liminka Bay Visitor Centre

Free guided tours for groups from daycare centres and schools

#### Rokua area

#### Sanginjoki River

#### Bay of Bothnia

### Organisations and other partners

- Northern Ostrobothnia environmental actors network
- Kiertokaari  
For more information, see p. 25
- Metsähallitus
- Oulu Region Environmental Services
- Community and Environmental Services Oulu
- Oulu Youth Council ONE
- Business Oulu  
Events such as Päivä Taitajana (Getting to know working life)
- European Capital of Culture 2026
- Children's Oulu - a child-friendly municipality
- Oulu Educational and Cultural Services
- University of Oulu
- Oulu University of Applied Sciences

### See also

- Circular economy roadmap
- 2030 Agenda for Sustainable Development
- Education programme
- Oulu City Strategy - Oulu 2030 - Cultural Climate Change
- City of Oulu Environmental Programme 2026

# Let's stop drifting and sail together

The Learning Stream for Sustainable Future means hope and working together. It is about moving from a realistic view of the current situation towards the desirable future.

In Oulu, we need a clear direction and goal on the road to a sustainable future. There is no time to waste, but together we can get good things started and done. We need to build a shared understanding of what the important themes of the Learning Stream mean in our daily lives and who will implement them with us. Let's make the journey meaningful for both those in the stream and those supporting the journey.

The Learning Stream for Sustainable Future is taking us towards a common understanding. Along the way, we will strengthen our human-nature relationship through good experiences, learn circular economy thinking and deepen our climate competence, while taking care of ourselves, each other and the environment.

We hope that this handbook will help you to find your own path towards a sustainable future and wellbeing in the Learning Stream. Please come and join us!

### Learning Stream for Sustainable Future working group

Paula Ratava, sustainable future teacher

Tarja Mankinen, sustainable future teacher

Pirjo Koret, Regional Director for Early Childhood Education and Care, Basic Education and Youth Services

Tero Aho, head of basic education at Hönttämäki School and Timosenkoski Nature School

Jussi Tomberg, sustainable future teacher



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Children and young people from Kastelli pre-school, school and upper secondary school  
Väртö daycare centre  
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Satu Pietola, Community and Environmental Services  
Helmi Riihimäki, Kiertokaari  
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### Service design and content production

Emilia Haapanen, Johanna Oris and Markku Pelkonen, Otava Oppimisen palvelut

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Anna Väänänen, Otava Oppimisen palvelut

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Sustainable future working group



**OULU**

[ouka.fi/opinvirta](https://ouka.fi/opinvirta)