

# FOREST Education GUIDE



## FOREWORD

### CAN THE FOREST SERVE AS A FULL SCALE COMPLEMENT TO THE TRADITIONAL CLASSROOM?

A unanimous – Yes! comes from all the participants from Sweden, Latvia and Norway in “Schools growing together with forests”, a project funded by Nordplus<sup>1</sup> in years 2023–2025. And that is why we are going to let their voices be heard in this guide to outdoor education in the forest, based on their shared experiences, tips and reflections. From the teenagers attending the camps to the primary school teachers, and professionals who run nature schools or work with forestry – they have all been involved in the project. Together we will give you answers to why the forest as a classroom is an alternative place for learning, how it can be done, and tips for you as a teacher. Or is it just as simple as opening the door and stepping over the threshold?

When the first cooperation in outdoor education between Latvia and Sweden started more than 15 years ago, the situation was quite different from today. Teachers in Latvia were not used to seeing the forest as a classroom and they had a curriculum that dictated their working day in detail. Simply encour-

aging them to go out and use nature as a classroom was not an option, but with the support of the teachers' guidebooks “Learning English Outdoors” and “Learning Mathematics Outdoors”, translated into Latvian by “Latvia's State Forests”, and some training, things started to change.

Now through this Nordplus project our respective countries together with Norway have been able to learn from each other and gain concrete and practical knowledge that teachers can use in their everyday lives as well as in the classroom. We have also strived for increased understanding and knowledge about our common forest and the area for learning it provides by organising workshops and camps in all three participating countries. The participants have ranged from ordinary primary and secondary school teachers who want to know more about learning in the forest, to outdoor educators and forest experts from different countries who have had the opportunity to meet and learn more about forests and outdoor life. And now we invite you to share their stories!

<sup>1</sup> Nordplus Horizontal is a cross-sectoral programme supporting innovative projects across traditional categories and sectors, as well as projects that address new, broad and complex challenges. Participation in the programme is open for all institutions and organisations willing to cooperate to develop education within a lifelong learning perspective.

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# WHAT IS SUSTAINABLE FOREST EDUCATION?



## → SUSTAINABLE LEARNING IN A SUSTAINABLE FOREST

Forests have always been important to the people in the Nordic and Baltic countries. Sweden is covered by almost 70% forest, Latvia by 55% and Norway by about 40%. But the forest itself is glocal, it's both a part of the global environment consisting of the Boreal Coniferous Forest Belt as well as local, we even sometimes see the forest as our local property and part of a narrow economic system. In the end, the forest doesn't care about borders, language, culture and traditions, so what we do locally affects us globally and vice versa. The forest affects us as much as we affect it, in history, today and in the future to come.

In the past, the forest was seen primarily as a resource for raw materials that could contribute to the development of our countries, raw materials that are still essential for Latvia, Sweden and Norway. There is no doubt that the economic development of our respective countries is still heavily dependent on sustainable forestry. But the forest has also become an arena, a place for recreation, sport and outdoor life. A place where we can rest, discover and experience, and also learn and reflect on ourselves and our nature. The concept of sustainable forestry

has also changed over the years and is more relevant than ever, especially when the value is not only in the raw material, but also in the place itself. And that's where schools come in, because the forest is also a place of learning, not only for subjects such as sports and natural sciences, but also for other subjects and for all ages. Today, social values are just as important as ecological and economic values, they are all interdependent. And when the decline in diversity leads to a disturbed ecology, the forest affects us even more than before.

And what better place to learn about diversity, cultural heritage, ecology or even subjects like history or geography than in nature? And what attitude and knowledge about forests and nature do we want today's children and young people to bring along in life? The whole education system has an important role to play, not only from an environmental perspective based on the Global Goals, but also through the cultural and social sustainability that nature contributes. Creating resilience in nature and in people is the goal we need to strive for, and therefore learning about nature in nature becomes important for our own as well as nature's health.



## → OUTDOOR EDUCATION – A DEFINITION

Outdoor education is usually used to complement other teaching methods to help students understand and clarify theoretical models and connections.

Setting, content, methodology and reflection are key to outdoor education. The lessons can take place in the forest as well as in a park, in the school playground or in the city and the activities are based on and developed from what can be found in authentic environments, what is current and what can be both experienced and performed outdoors.

Students are always actively involved in outdoor education. Exploring nature and the environment, providing detailed, particular situations makes learning more meaningful.

They gain experience through the activities and are encouraged to cooperate with their peers. But experience alone does not create knowledge, learning takes place through the interplay of activity and reflection. We need to reflect to gain knowledge and in this way of teaching we combine physical activity with sensory experience, then reflect, review and develop further understanding and knowledge.

Outdoor education is also a field of research and education where interdisciplinary teaching is inevitable because nature is not divided into subjects. And outdoor learning also helps us to remember better, because the knowledge we gain is linked to an experience involving several senses.



## → WHAT IS SUSTAINABLE OUTDOOR EDUCATION IN FORESTS?

Ultimately, sustainable forest education is about inspiring the next generation of environmental leaders. By providing opportunities for outdoor learning and fostering a love of nature, we can create a more sustainable future. One of the main aims of the project was just this, to emphasise education in and about the forest, because by understanding the importance of forests and learning about them, we give young people a powerful tool to understand and address many of the global challenges.

Outdoor education aligns seamlessly with the United Nations Sustainable Development Goals (SDGs), and by fostering a connection with nature and promoting environmental stewardship, outdoor education contributes to a more sustainable future.





## THESE ARE SOME OF THE WAYS IN WHICH OUTDOOR EDUCATION IN FORESTS CAN SUPPORT THE SDGS:

- **SDG 4: Quality Education:**

Outdoor education can improve learning outcomes by providing hands-on experiences and making education more engaging. It also encourages curiosity and provides experiential learning opportunities that enhance critical thinking, problem-solving, and creativity. By being outdoors, you also reach out to students that prefer a more practical way of learning.

- **SDG 3: Good Health and Well-being:**

Spending time in nature has shown to reduce stress, improve well being, and connection with nature can improve mental and emotional health. Outdoor education also promotes physical activity and a healthy lifestyle.

- **SDG 11: Sustainable Cities and Communities:**

Outdoor education can foster appreciation for green spaces and the importance of urban planning that prioritizes natural elements.

- **SDG 12: Responsible Consumption and Production:**

Outdoor education promotes sustainable practices, such as minimizing waste, conserving resources by wise consumption, and respecting the natural environment.

- **SDG 13: Climate Action:**

Direct experiences in nature foster a deeper understanding of climate change and raising awareness of environmental issues like pollution and deforestation. This can empower students to become environmental stewards and take action to address climate change.

- **SDG 15: Life on Land:**

Outdoor education provides opportunities for students to directly observe and interact with ecosystems. It fosters a sense of connection to nature and encourages respect for all living things.

- **SDG 17: Partnerships for the Goals:**

Outdoor education often involves collaboration with local communities, environmental organizations and other stakeholders. By this it fosters a sense of shared responsibility for the environment.



## A GLIMPSE INTO THE WORLD OF OUTDOOR EDUCATION IN FORESTS

### SEEN THROUGH THE EYES AND MINDS OF PROJECT PARTICIPANTS

Sustainable forest education involves immersing children in nature, allowing them to use all their senses. Outdoor learning enhances the learning process, making it more engaging and effective.

Sustainable forest education is an outdoor learning experience rooted in nature that emphasises hands-on learning and reflection on sustainable development.

Sustainable forest education means taking learning outdoors. By moving the classroom into the forest, we create a unique and immersive learning experience. It's about fostering a deeper connection with nature, inspiring creativity and cultivating a sense of responsibility for the environment.

Sustainable forest education is most effective when students can connect with a local forest to learn and experience in a nearby forest. At Skogkurs (Norway) we highlight the multiple values of the forest and promote its incredible ecosystem services. At the same time, it's important to acknowledge the challenges and drawbacks of forestry and to encourage critical thinking. Discussion is essential to the learning process and developing solutions to complex problems is a valuable skill for the future.

Authentic learning situations are fundamental to outdoor education. The forest is therefore the best place to teach about ecosystems and ecosystem services, to learn about the organisms that ARE the forest and, above all, to develop a relationship with the forest.

Sustainable forest education is about understanding how we can manage the forest in a sustainable way and produce materials from renewable sources in the forest, the forest is the best place to learn.







## ACCESS TO NATURE AND FORESTS IN SWEDEN, NORWAY AND LATVIA

Nordic and Baltic cultures have a strong tradition of outdoor recreation and a deep connection with nature, which has shaped their public access laws.

The Nordic countries, especially Sweden and Norway, are known for a unique cultural heritage of public access to nature, stemming from centuries of common land use and a strong cultural identity tied to the outdoors. This right, often referred to as "allmansrätten", allows us to roam freely in the forest,

mountains and countryside, as long as it's done in a responsible and respectful way. Compared to the Nordic countries, which have more liberal access laws, the Baltic countries have more restrictions, especially on private land. In Latvia, you are welcome to enjoy the forests, rivers, lakes, sea, swamps, meadows, and other environmental areas, as long as there are no restriction signs from the owner and you follow a basic list simple principles such as "do not disturb" and "bring back what you brought".



### **"DON'T DISTURB AND DON'T DESTROY" ARE THE KEY PRINCIPLES IN NATURE OF ALL THREE COUNTRIES – SWEDEN, NORWAY AND LATVIA, WHICH INCLUDE:**

→ Respect nature and wildlife. Never stress the wildlife, the forest is their home and we are the visitors.

→ Practice "Leave No Trace" principles and minimise your impact on the environment. Bring only what you can take back, choose carefully where you camp and minimise your impact on the environment in every way possible.

→ Be aware of local regulations. Regulations and restrictions may vary according to location and season. Pay particular attention to fire restrictions, both in protected areas and during dry periods. Always extinguish fires completely.

→ Be aware of private property, especially around dwellings or cultivated areas.

→ Also be aware and mindful of other people enjoying nature. Even if we often stress that, in nature, there is room for speaking, singing and playing aloud, there is also an opportunity to enjoy the silence, or at least enjoy the sound of nature!

When using the forest as a classroom for groups, be sure to explain and emphasise these principles and use only loose natural materials such as fallen branches, leaves on the ground and plants that you are allowed to pick. The simple rule is never to dig up plants, remove bark or break twigs from living trees. To learn more about the right of common access in your country there are plenty of free-to-use material for schools and the general public.

While both Sweden and Norway offer extensive rights of public access, there are some differences. Norway has stricter rules on access to private land, especially for camping and overnight stays. Sweden is generally more permissive, allowing access to private land for recreational purposes as long as you don't disturb the landowner. The rules on fire and fishing are also stricter in Norway and Sweden has more relaxed rules on picking berries and mushrooms; however, it's crucial to only gather for personal use.

The Swedish Allmansrätten grants significant freedom of movement, allowing access to most private land for recreational purposes. However, this right comes with responsibilities like avoiding disturbing landowners, minimising impact on the environment, and respecting private gardens and cultivated areas. Rules regarding activities like fishing and the use of fire can vary between the countries, for example, regulations on fishing licenses and campfire restrictions.

In comparison, Latvia has freedom of movement and recreation in state-owned forests, that cover roughly a quarter of the country's territory. State forests are almost as open to public as in Sweden, including everyone's right to pick berries, collect mushrooms, collect birch juices and camp, but more restrictions can be introduced by private forest owners. To follow the ownership of the forests in Latvia on site you can use digital apps such as LVM Geo Mobile, that clearly show your location and available forest infrastructure.



Understanding these nuances is crucial for responsible outdoor activities in all three countries. By respecting the rights and traditions of each nation, everyone can enjoy and learn in nature while preserving it for future generations.



# HOW CAN FOREST EDUCATION BE FUN?



## → WHY TEACH IN THE FOREST?

Throughout the project we have met educators from the three countries, all teaching different age groups. Discussions about various approaches on forest education, how to encourage and integrate insights and knowledge into everyday teaching have been part of the participants' reflections. Also challenges and problem solving have been part of the discussions. But in the end, they all agree that the outdoors can create rich and meaningful learning experiences that benefit students' academic, social and emotional development.

### WHY TEACH IN THE FOREST? VOICES AND REFLECTIONS FROM PROJECT PARTICIPANTS:

→ I believe that outdoor education benefits both teachers and students, promoting better health and improved learning outcomes. My experience of teaching in the forest has been overwhelmingly positive, especially when using an adventure-based pedagogy that encourages discovery, play and collaboration.

→ By embracing outdoor learning, we can foster a deeper connection with nature, improve children's physical and mental health, and create a more sustainable future.

→ One of the most rewarding aspects of outdoor education is witnessing the transformation of disinterested children into curious explorers. They develop a sense of wonder, respect and kindness towards nature.

→ Outdoor learning encourages creativity, problem solving and cooperation.



→ It's fun! In addition, the outdoors makes me, the teachers and the students feel better, it is physically beneficial and improves the immune system. Everyone should have the opportunity to spend time in the forest and be able to rest as well as be physically active.

→ We often find that the students and teachers who come to us appreciate outdoor learning as a complement to what they do indoors. The outdoor classroom complements the indoor classroom, we need both. The aim is to inspire them to continue using both indoor and outdoor learning environments after a day in our nature school.

→ The forest is an ideal learning environment! It offers a change from the traditional classroom and encourages different forms of communication between students and teachers. In addition, the fresh air and physical activity contribute to overall well-being.

→ Teaching in the forest involves all the senses, students can learn through sight, sound, touch, smell and movement.





→ Outdoor education promotes active learning and encourages physical activity and engagement.

→ Outdoor learning encourages creativity, nature inspires new ideas and creative expression.

→ It fosters a love of nature. Spending time outdoors helps pupils to develop a deep appreciation of the natural world.

→ Nature encourages environmental stewardship. By understanding and valuing nature, students are more likely to protect it.

→ Nature provides a unique learning environment. Nature provides endless opportunities for exploration and discovery.

→ Nature never sleeps and provides a flexible classroom with fantastic opportunities. There is so much going on in the forest and so many materials and ideas to work with.

→ It is important to take advantage of the situation and the place, the teacher has a great opportunity to influence and the more you know yourself, the more fun it will be.

→ Pupils almost always shine in the woods. Children who may be restless or negative indoors often thrive when they can be active outdoors. Teachers get to see their students in a different environment and in different situations, as they show other sides that are not noticeable in the classroom. This is something that we see as a great benefit to both the students and the teachers, and something that teachers include in their assessment of learning objectives.

→ One of the most rewarding aspects of outdoor education is seeing the joy on the students' faces as they try new activities such as felling trees, chopping wood and building fires.

→ The use of play as a method of learning is well suited to the forest, where there are fewer demands on performance and a desire to explore.



## TIPS AND ADVICE FROM TEACHERS



### ADVICE FOR COLLEAGUES, PARENTS AND PRINCIPALS ON HOW TO SUCCEED WITH OUTDOOR EDUCATION IN FORESTS:

→ Make it easy to start, an outdoor lesson in the schoolyard can be the first step.

→ Co-discover as a teacher, you don't need to be a know-it-all just because you're a teacher!

→ Just do it: Take the initiative and start incorporating outdoor learning into your routines. Perhaps one outdoor lesson a week?

→ Start as early as possible, but better late than never.

→ Be a role model as an adult, to be honest and authentic is the best option.

→ Allow time for playing: Provide opportunities for unstructured playing as it contributes to both physical and mental creativity.

→ Linking several topics is easy.

→ The Global Goals is included almost whatever you do outdoors.

→ Is there a forest near the school? Who owns it and can you use it? Is it possible to collect and use materials from the forest?

→ Get help from parents and grandparents, they are a resource. Maybe contact people who are active in nature organisations

→ Cook and eat together outdoors – nature also encourages hunger!

→ Create a cosy atmosphere: Promote a pleasant environment during meals to encourage social interaction and relaxation.

→ It is important that the pupils themselves have experiences to which they can relate their learning and knowledge. Then it's easier to understand the development taking place through the interplay of knowledge and experience.





## → PLANNING AND MAKING A FLOW OF ACTIVITIES IN THE FOREST CLASSROOM

There are some obvious differences between the outdoor and indoor classrooms. But the main idea is to be more active outdoors and leave the indoors for preparation and theoretical activities such as writing and reading.

Even though reading outdoors is really encouraging, it's sometimes better to at least look for more written or published information in the inside classroom. The basics remain the same with the didactic questions 'What, When, Why', How and in this case the important Where? that is emphasized in the planning of the outdoor lessons. The place can of course look different depending on seasonal changes, conditions and how much time there is to spend outdoors. Also a risk and safety assessment needs to be conducted when planning a lesson in a new place.

If you prepared inside you just need to refresh and use simple, short instructions outside. In the outdoor classroom you also have the possibility for better use of your body language. Always remember to adapt to your own ability, subject and the group of students

When gathering the group outside for activities, try to choose a location without too much distracting noise, strong sun or wind. Stand in a circle, and you as a teacher always stand with the wind in your back, then it's

easier for the group to hear you. The circle also enables everyone to be heard and seen as well as keeps the warmth in the cold winter months.

Awake the enthusiasm! How do you arouse interest in what you want to teach? Inspire by showing an object or telling a short story about the place. Remember to show your own enthusiasm for the task.

Create independent activities and focus on students' own experience and problems. Some activities can be individual and some in groups, make sure that everyone knows the aim of the lesson and what has to be achieved within the group.

Reflection and knowledge check – first discuss what you have done outdoors and then discuss the experiences and thoughts. Follow up on any questions that have arisen, both your own and the students'.

The outdoor environment is also an asset because it looks differently depending on seasonal changes, weather conditions and time of day, that contributes to the same place being experienced in many different ways. Therefore, consider the conditions of the site when planning outdoor lessons.



## → PROMOTING PHYSICAL AND MENTAL HEALTH THROUGH OUTDOOR EDUCATION

As reports show that today's children and young people tend to be less active and more sedentary than in the past, outdoor education in the forest can help! Research shows that outdoor learning with regular physical activity and contact with nature can have both direct and indirect positive and meaningful effects on learning, academic performance, decision making, personal health and social development. Nature itself prevents stress and helps us maintain balance in our lives, so simply listening to the birds singing, the wind blowing in the trees and the green surroundings can have a positive impact on both body and mind.

### SDG3 LINKS TO HEALTH AND WELL-BEING IN NATURE:

→ **Mental health:** Spending time in nature has been shown to reduce stress and improve mental well-being.

→ **Physical health:** Outdoor activities such as hiking and camping promote physical activity and healthy lifestyles.

### OUTDOOR EDUCATION IN THE FOREST CAN SIGNIFICANTLY IMPROVE LEARNING AND PHYSICAL AND MENTAL HEALTH BY:

→ **Physical activity:** Include physical activity and playing, even in unrelated subjects, as it improves cognitive functions and the overall health.

→ **Sensory experiences:** Engage all senses to create a more immersive and memorable learning experience.

→ **Free time and play:** Allowing time for unstructured activities, as these encourage creativity and problem-solving skills.

→ **Cooperation:** In the forest there is space to move, talk and listen. By focusing on the activities, how to cope in nature and problem solving, we naturally need to help each other and cooperate.

→ **Getting a sense of nature and understanding** that we are visitors and that the forest itself is a source of well-being.





## → CHALLENGES AND HOW TO OVERCOME THEM

When asked, teachers and others who take visitors, groups or classes outdoors often describe a common challenge. The weather. Of course, a rainy day can be a real hindrance to concentration and enjoyment. But with the right clothing, even a wet, cold or rainy day can be an interesting learning experience in the woods. So, it is all about the preparation, which is also a challenge for some teachers. Either the children don't have the right clothing, or they don't want to use the clothes and equipment they have. Urbanisation also means that many adults and children do not have the clothing or the equipment and equipment adapted to our climate. However, after a few outdoor lessons, most students tend to understand that staying dry and warm is the best way to stay focused and have a good experience in the outdoor classroom.

Another issue that comes up in discussions is the problem of transport logistics. Most schools have to travel by bus to the nature schools or to the forest, and the schools cannot afford the cost. Sometimes there is a project that allows schools to travel for free or at a reduced rate, but this is often limited, and in order to achieve a long-term relationship with nature and make outdoor forest education part of everyday teaching, other solutions need to be available.



### THE PARTICIPANTS' REFLECTIONS:

→ The biggest challenge I face is dealing with the students who aren't dressed properly for the weather. If the students are cold, they can't concentrate on learning.

→ Sometimes it's difficult to move my classroom outside if I'm the only teacher who wants to be outside. It's important to have the administrative support and a school culture that values outdoor learning. Having clear plans, resources and staff support makes it much easier to implement.

→ Integrating outdoor learning into the school curriculum can be challenging, as practical exercises often require more preparation and adult supervision than is usually available.

→ A major challenge is overcoming societal fears of the natural world. Many people, including children, are afraid of things like insects, snakes and wild animals. This fear, often instilled by parents and the media, prevents them from connecting with nature.

→ Some students are anxious about their days at the nature school, but they soon settle in and often enjoy the challenges they are given or face. At our nature school we run a small farm, and the children enjoy working with the animals, looking for small insects and just enjoy being in the woods and fields.

→ Getting teachers to continue working outdoors after courses or visits to the nature school is a challenge. They are inspired but easily get stuck in old ruts. We meet the students too seldom and cannot influence more than in the moment, nor do we have the opportunity to follow up or give new opportunities if a group has been with us and has not worked so well, for example due to the weather.

## → HOW TO SOLVE THE CHALLENGES

Effective planning, communication and flexibility are the key for overcoming the challenges of outdoor education. The didactic question is broadened to include a 'where' and a stronger 'when' in outdoor education planning, as seasons and weather conditions play a greater role. And not only the cold in

winter or rainy days, in summer the sun can be our worst enemy! Bringing water and knowing where to find shade is also part of the planning process. So again, the forest can give us what we need in terms of shelter from the sun, rain or wind.

### TIPS FROM TEACHERS:

→ Educate parents about the benefits of outdoor learning and how to prepare their children.

→ Start in the early years: Introduce outdoor experiences in preschool to foster a positive relationship with nature.

→ Lead by example: Teachers should be passionate about outdoor education and model positive behaviours.

→ Create inclusive environments: Adapt activities to accommodate children with disabilities.

→ Good communication with parents is essential. Clear plans and information can allay many concerns. It's also helpful to have extra equipment and clothing at school in case the students forget something. And of course, it's important to have a back-up plan in case the weather doesn't cooperate.





## → NATURE SCHOOLS AND FOREST EDUCATION CENTRES

The nature schools and forest education center are constantly working to inspire teachers to use nature as a classroom. At Hamar Nature School in Norway they lead by example and teach all first-year teacher education students at the local university how to use nature as an extended classroom for interdisciplinary learning. They also run courses for teachers and have recently applied for funding to train 90 teachers as part of the Outdoor Year 2025 initiative.

The nature schools also try to influence the schools to increase the participation in the forest education and to make outdoor learning a regular part of the curriculum. This will familiarise both children and adults with appropriate clothing and behaviour in nature, the routines also make it easier to concentrate on learning.

**The Falun Nature School** is part of the network of about 70 nature schools in Sweden. They welcome all students in the municipality for full-day programmes, from five-year-olds to upper secondary school students. There are different themes throughout the year related to the forest, the environment and World Heritage. They also offer programmes for secondary schools and for teachers and students

at the university. Their open-air farm is open to visitors all year round and a few days a year there are family events with hundreds of visitors at each event.

The contact with the schools and clear expectations are always established between the teachers and outdoor educators before the groups visit a nature centre or nature school. It's important to be prepared to shorten outdoor activities in case of bad weather. Some schools and nature schools provide educational support materials, show good practice and can give advice.

Preparation letters are sent to each teacher before visiting the nature school that they also ask the teacher to check the clothing and shoes at the school before leaving. If there is a shortage of clothes, far-sighted teachers often lend to others. Sometimes a little extra can be borrowed at the nature school, and in the worst case the programme ends earlier than planned. Teachers and parents are always welcome to contact the nature school with their concerns, for example when sixth grade pupils are given the opportunity to practice lifesaving by taking a dip in the lake through a hole in the ice.



Teachers are nowadays less concerned as they are used to the activities and many have been there before. However, the children and the parents may be concerned that the children will get sick from being outdoors, which is worrying as nature heals, not the other way around. The fact that we use tools and saws etc. is not a concern, which is positive as many children today cannot handle a knife, axe or saw. Or make a fire for that matter. It's good that they can learn and practice with nature schools.

**Tervete Nature Park**, run by the Latvia's State Forests, welcomes groups from all over Latvia, offering day trips and engaging activities. With around 5,000 students participating each year, the programmes are an important part of Latvia's forest education landscape. A team of environmental specialists, supported by park guides, deliver a range

of programmes. These include winter programmes on tree growth and animal adaptations, as well as outdoor activities such as climbing, obstacle courses and river crossings. The popular Green Class offers a 40-minute to one-hour introduction to forest ecology, followed by a guided tour of the park. Other workshops include bread making and crafts.

Over the past decade, the park staff has noticed a shift in the children's attention spans. They are more active and tech-savvy, often seeking information online. To adapt to these changes, the staff has incorporated more hands-on activities and interactive elements into the programmes. For older students they offer more in-depth expeditions to explore the different stages of forest development.

## → DISABILITIES AND SPECIAL NEEDS

The nature schools and forest education centers meet all kinds of students, and some of them struggle in the mainstream school environment. Often they 'blossom' when they work outside where the strengths that are not otherwise visible and noticeable, come to life. The outdoors also offer space, the classroom expands and everyone can find space enough space to move and be active.

Many schools and centers provide educational support materials and offer solutions for students with special needs. In groups where students have physical disabilities, adaptations of the programmes are made, like adjusting the time and place to make them accessible to everyone. It's also noticeable that the peers are often very helpful and cooperate more when mixed groups visit the forest.





# HOW CAN MORE PEOPLE GET INVOLVED IN FOREST EDUCATION?



## HOW CAN WE ENCOURAGE OUTDOOR EDUCATION?

With all this in mind, there is still work to be done as teachers still tend to stay indoors even though the alternative is right in front of them. The forest is often quite close in all three countries, and we have the accessibility through the common access rights and code of conduct.

By integrating outdoor education into school curricula, we can empower future generations to become responsible global citizens committed to a sustainable future. So, what can we do to encourage more people to get involved in outdoor education in forests?

### THE PROJECT PARTICIPANTS SHARING THEIR IDEAS:

→ Take part in projects with different partners, local or international – like this one!

→ Policy change: Advocate for policies that support outdoor education.

→ Community Engagement: Work with parents, schools and local organisations to promote outdoor education.

→ Try to encourage colleagues, parents and school leaders to get outdoors and go on nature adventures with children, as this promotes optimal learning experiences.

→ Reading about outdoor education can inspire new approaches and give you the understanding and confidence to try it yourself.

→ Attend conferences and join platforms where you can meet colleagues, researchers and professionals in the field of outdoor education. You can find both national and international forums and platforms to attend, like “Ute är inne” in Sweden or The European Forest Pedagogical Congress where you can learn and exchange ideas and networking.

→ Sign up for a course! Linköping university holds an international master programme in outdoor education, and nature schools and forest education centers offer workshops, and there are online events as well to attend.

→ Teacher training: Provide opportunities for teachers to learn about outdoor education. At universities as well as the continuation of teacher training and advisory support.

→ Use teaching material such as the teacher guides made by the Swedish nature schools, all connected to different subjects and curricula. Also you can find a lot of free material to download and use.

→ Include child-led learning: Let children explore their interests and encourage questions. Emphasise that outdoor education is both playful and immersive.

→ It's important to make outdoor learning a regular part of the curriculum. This familiarises both children and adults with appropriate clothing and behaviour in the outdoors, making it easier to focus on learning.



## → LATVIAN FORESTERS DISCOVERING DALARNA 2023

For long-term results in projects and their continuation, you need to involve all participants and spread knowledge and exchange experiences, which is best done in real life with face-to-face meetings and activities. And when you're planning interregional camps and workshops, you need to involve and consider different perspectives, and in projects like Nordplus this is possible to the full. As part of "Schools growing together with forests", we were therefore able to welcome eight foresters and coordinators from Latvia to Sweden and the Dalarna region to exchange experiences and plan the next youth camp. Two days full of activities and meetings resulted in a clearer view of the needs of the future youth camp and also into an exchange of experiences between Latvia and Sweden.

In Sweden, all members of the project took part, and we travelled around the region with Lotta Carlegård, who is part of the project as a member of the Nature School Association,

and also as a local guide. Our first stop was in Siljansnäs, where the regional Naturum is located on the top of Björkberget, overlooking a big part of the Dalarna countryside. All over Sweden you can find these nature education centres, called Naturum, which are run by the government and open free of charge both to the public and the schools, all with the aim of increasing interest and knowledge about nature and the environment, locally, nationally and globally. There are 32 Naturum in Sweden, many of which are also members of the Nature Schools Association.

With a breathtaking view from the newly opened tower, we had "fika" and a presentation by the local staff. The tower is made of charred larch wood, all FSC-certified and inspired by the Japanese technique of Shou Sugi Ban, and you can choose to walk up the stairs to the 32-metre-high tower or take the lift, which makes it accessible to all.

<https://www.naturumdalarna.se/english/>



Further north is Siljansfors Forestry Museum, which has just celebrated its 50th anniversary, and where the Swedish University of Agricultural Sciences has an experimental forest of 1,610 hectares (16.1 km<sup>2</sup>). The land is owned by Stora Enso AB, and a long-term agreement dating back to 1921 allows the university to use the land mainly for forest research. But the main reason to visit Siljansfors is to see the exhibitions about forestry and its history. Both in the exhibition halls and around there are authentic buildings and housing for the forest workers over the years. The museum is also part of our project, and we got a guided tour from Ola Langvall, as well as we made a traditional lunch over an open fire in one of the fire huts – a log cabin, that has been used as a winter residence for lumberjacks for more than 200 years. This could be an option for accommodation at the youth camp, what if the youth stayed in a museum?

<http://www.skogsmuseum.se/>

The next day we stayed in the area around the World Heritage site in Falun, once the most important copper mine in Europe and now a popular tourist destination. But the mine couldn't have flourished without the forest, and this day was all about the surrounding woodlands. The day started at the Falun Nature School, followed by a walk over the slag heaps, which are a reminder of the smelting houses by the small stream that supplied power to the blast furnaces. Then following the path and into the forest, we did some activities before arriving at the farm run by the nature school. That day, we were also joined by representatives from the Swedish State Forest and the Skogen i skolan foundation, as well as a private forest owner, to get the different perspectives on forestry in the region and in Sweden. We had a presentation at the State Forestry Office, talks and reflections over lunch at the mine area, before it was time to descend to the heart of the World Heritage site, Great Grandma, the copper mine! This day would also be included in the youth camp as the forest was essential in all mining activities.



<https://www.falugruva.se/en/>



## TEACHER WORKSHOPS 2023-2024

During two years around 80 teachers from all over Latvia got the chance to participate in a 3-day further education courses filled with workshops to learn more about nature and forestry as well as how to practically use the outdoors as a classroom. A key theme was the interconnectivity of environmental, economic and social factors and the teacher camp also provided a valuable platform to share experiences, inspire each other and learn about sustainable forest education.

The courses highlighted the importance of teacher support and collaboration. Sharing experiences, ideas and resources can help educators overcome challenges and implement new teaching strategies. As a part of the Norpldus project these courses were joined by Norwegian and Swedish forest educators who had workshops with the teachers at the at campsite "Ezernieki", asking their views on outdoor education and what they already know and do today. The ideas and thoughts from them are presented in this guide and they give us a great hope for the future of sustainable forest education!





## → ADVENTURE AND FOREST CAMPS FOR YOUTH

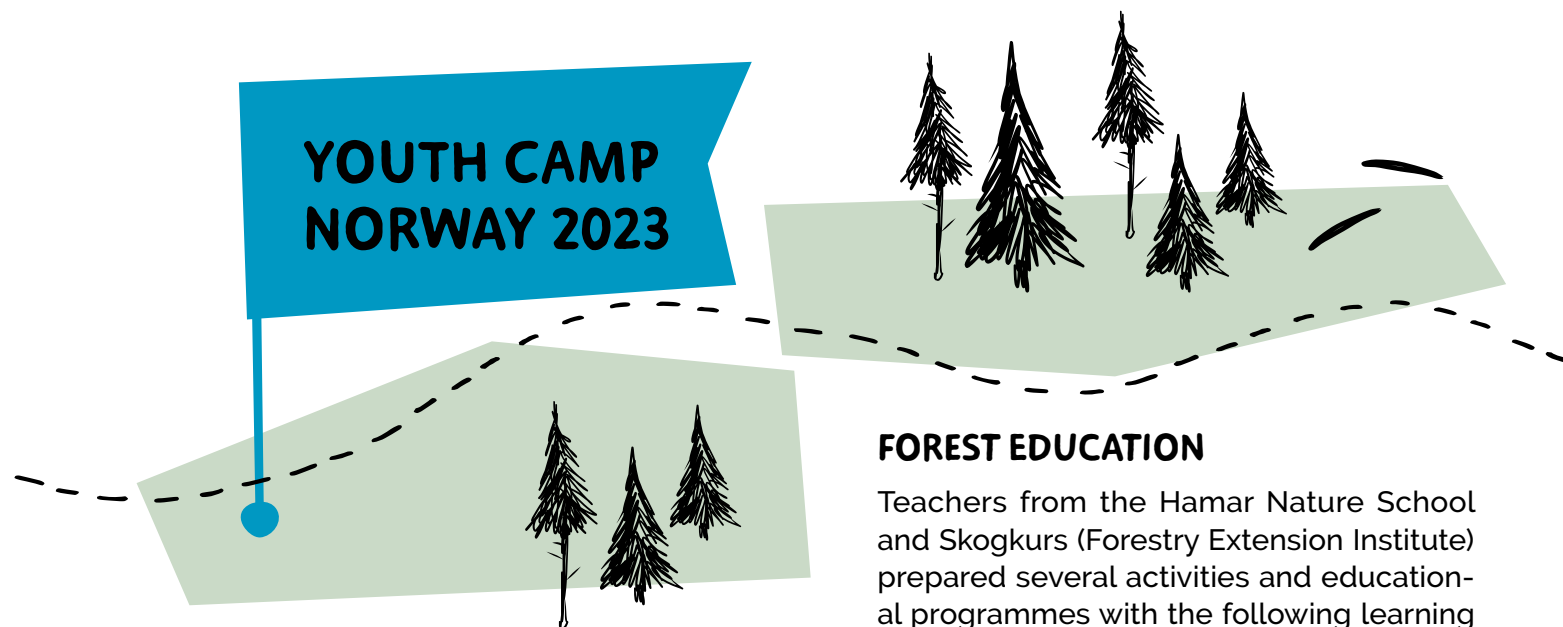
Camps in the wilderness or lessons in the park? The outdoor education offers a wide range of opportunities, from short lessons in the school yard or the park, to full weeks of hiking and exploring the wild. Within the project we have arranged three camps, one in each country and it's time to reveal a bit more about them.

Running outdoor camps for schools not only provides experiences and knowledge about nature and the environment, but also the opportunity to achieve curriculum objectives. Most subjects can be part of a camp school programme, and in addition, the youngsters learn to know each other in a way that a traditional classroom cannot offer.

Many students also need other learning environments to be at their best, get the chance to show interest as well as their strengths and knowledge in their right element. Those less used to outdoor education and experiences will also learn a lot – from feeling safe in nature to public access rights, ecosystems and how we affect nature as it affects us. A circle of life that we are all part of and where we can feel involved and responsible for protecting the local environment as well as forests and mountains.



## YOUTH CAMP NORWAY 2023



### FOREST EDUCATION

Teachers from the Hamar Nature School and Skogkurs (Forestry Extension Institute) prepared several activities and educational programmes with the following learning objectives.

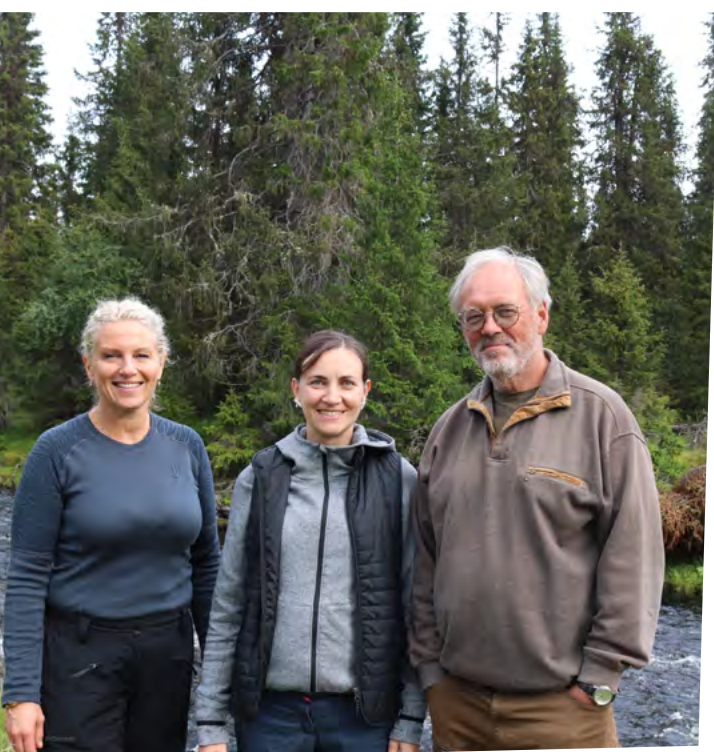
- Following tracks and navigating with maps, finding posts.
- Understanding the importance of staying together as a group, especially in the wilderness and in the Norwegian weather conditions (rainy, cold, foggy).
- Become familiar with the Norwegian nature.
- Getting to know some of the local species and their ecology.
- Becoming aware of the conflict of interests: do we want sheep or wolves in Norwegian nature? How do we prioritise and compromise?

Wilderness camping, forest education and Norwegian trolls were the main ingredients of this six-day youth camp in Norway in August 2023.

Twenty young people and five adults travelled from Latvia to the wilderness in the mountains near Hamar in Norway. There they stayed in huts with no electricity or water. Food was cooked over an open fire and water was collected from the river or a water pump. The young people had to do all the work: they had to light the bonfire, carry the water buckets and work in groups to prepare dinner for everyone. Everyone explored nature, hiked in the mountains, canoed in the river and fished in the lake. Some even went into the cold water – either voluntarily for a swim or accidentally during the canoe trip.







## NORWEGIAN TROLLS

Along with the king, the princess and her hero, trolls are the main characters in Norwegian fairy tales. They can be huge or tiny, sweet or monstrous, helpful or mean. But they all have one thing in common: they are mythical creatures of nature. They are an integral part of the forest, the moor, the lake or the mountains. And they often have a complicated relationship with humans.

As you can see, trolls are an important part of both Norwegian nature and Norwegian culture. To learn more about trolls, the group visited Hunderfossen, an amusement park with trolls and fairy tales.

<https://hunderfossen.no/en/>

## CHALLENGES AND RESULTS

The teenagers were a diverse group, aged between 13 and 16 years old, and they came to the camp for different reasons. An important part of the experience for them was to find their own way and make new friends. The adults also came from different backgrounds. For the organisers this was something important to consider for this trip. They needed to clarify the hopes and expectations of the participants. To ensure a safe and inclusive atmosphere, the leaders had to prepare some prepare ice-breaking activities and fun games.

August is by definition still summer, but when you are in Norway it may not feel that way. Up in the mountains near Hamar, this group of young people and adults from Latvia had to cope with rain, fog, cold, freezing water in the river and hungry mosquitoes. But the excitement of being out in the wilderness, experiencing something new, facing challenges and making new friends overshadowed the obstacles.

The youngsters learned to take responsibility for themselves and others, to work together, to cooperate and to live without everyday luxuries such as toilets, showers and electricity.

## YOUTH CAMP IN LATVIA 2024



At the beginning of July, 2024 altogether 20 Latvian 9–11 years old children and 6 Norwegian youngsters met in the Latvia's State Forests Nature Park in Tērvete to take part in the environmental education camp "Forest fairytale - the forest grows, we grow too". With the help of the Hamar Nature School and the Norwegian Forestry Extension Institute, the Norwegian youth had prepared various exciting tasks about the forest for the other camp participants, while the Norwegians were able to get to know the riches of Latvian forests and the traditions of the local Zemgale region.

The head teacher of the camp, Edīte Bēvalde, says: "The day spent with the ranger was a great benefit for the children. During the day, we learned together to determine the height and the age of trees, to take various measurements in the field, and we also saw how the battle with the eight-toothed bark beetle takes place."

The main hero of Latvian national forests in the fight for clean forests – Pigman was a surprise guest arriving to campsite, who emphasized how responsible everyone should be taking care of nature. Camp participants sang songs and played games with Pigman. After he left, everyone made a cloth bag for themselves to use when going to the store







so as not to create excess plastic waste.

The camp was also visited by a representative of the scouts, who taught how to navigate and survive in the forest. In the meantime, another forest challenge was prepared - an adventurous night track. "Everyone was waiting for the opportunity to try the created track with an eager excitement - one was ready to throw himself into challenges without thinking, another could not hide his fear. However, the adventure was a success for everyone," the camp leader Edīte Bēvalde shares her impressions.

In the final camp days together with the environmental education specialists of LVM Nature Park in Tērvete, the children learned a variety of information about the birds and animals of Latvia. Every evening, one of the children was nominated to receive a "Golden Cone" for special merits till everybody got one. Also, everyone received thanks from the teachers for this adventure!



## YOUTH CAMP IN SWEDEN 2024



In August 2024, a group of 25 people travelled to Sweden from Latvia to experience Swedish nature and culture. They participated in various outdoor activities such as canoeing, fishing, hiking and wood carving. It was mainly teenagers between 12-16 year old but also a teacher and representatives from the Latvia's State Forests and Tērvete Nature Park.

The camp took place in the region of Dalarna and was divided into three parts, each focusing on different aspects of Swedish nature and history. The first part took place in the area surrounding Falun, a UNESCO World Heritage Site known for its copper-mining history. Participants explored the forest, went canoeing, fishing, carved the wooden Dala horses and visited the historic copper mine. The second part took place in Siljansfors, where they learned about forestry practices through history, cooked their food on open fire and stayed in traditional loggers' cabins. The final part was in the mountainous region of Transtrand and Sälen, with hikes, fishing and even taking a swim in a waterfall deep into the forest.

The town of Falun is mostly known for its copper mine, which in many ways has contributed to Sweden's growth and wealth since the Middle Ages and into the 1900s. We started off with a hike in the World Heritage Forest and got to know the animals at the Nature school, it followed by a wood carving workshop of the traditional the traditional Dala horse, the symbol of Sweden that has its roots in the region. The youth as well as

the adults all got to try out and then later continued on their own. It became popular to sit by the fire in the evenings, sitting by the fire and continuing to carve one's horse became a hit, the very same way that forest workers for centuries have carved wooden horses in the light of the fire during long, dark winter evenings. The horses then became gifts to bring home for the children when their fathers finally came home after weeks away in the forests.

We had a guided tour in the depths of the Falun mine, today the heart of the World Heritage Site. The access to forest has been crucial for the mining industry through the years and it became obvious when the guide told us about how much wood and coal was needed for setting fire to the ore-filled mountain. The torches needed for light and the smelting houses with their blast furnaces that were placed all over town. The entire area around Falun was basically bare and cut down, and therefore a protected area. A "peace mile" was introduced in the 1700s to protect the forest from logging and making charcoal in the kilns. The prohibition led to an extensive network with transporting coal and firewood long distances to contribute to the mine's needs.

The waterways were the most important transportation routes and in Falun, there was lake Runn where timber, coal, ore and copper were transported. Today, the lake is a well-visited place for nature experiences, outdoor life and recreation. The camp was based on the shore of the lake in a scout camp and there were plenty of opportunities to go canoeing, fishing and swimming in the lake. To take a swim was also the only way to clean up as there were no toilets or showers available.

The project also involved Siljansfors Forest Museum, the Swedish Forest Agency and the organisation Forests in School. Then we moved the camp further north and had the opportunity to live like old-time lumberjacks at Siljansfors. The youth learned to cook the traditional food on open fire and visited the open-air museum as well as the two large exhibition halls with tools, chainsaws and





models of how working in the forest has developed over the years. In one hall there is an exhibition of floating where the history of log-driving on rivers and lakes shows how important the forest combined with access to waterways has been crucial for Sweden's economy and development. The night was spent inside the open-air museum in loggers' houses from different eras, from the smoky log cabin from the 17th century to the more modern barracks from the 1950s. In those days there were many young girls who got their first jobs as hosts and kitchen maids far into the forest in these kinds of barracks.



It was a tough job, with the young girl working alone and away from her family for long periods of time, making sure the men got plenty of properly cooked food and keeping the barracks clean and warm. But these girls had a relatively high status and were well paid, which made the jobs popular. In the old log cabins life was much harder and the men had to cook their own food, which consisted mainly of smoked and salted pork and pancakes made from barley flour and water, called 'coal buns'. This is a popular dish today, served at various events in the forest. The youngsters in the camp were allowed to fry and serve this forest delicacy to their friends, but now with both lingonberry jam and traditional butter sauce as a side dish. They also cooked and served other dishes for their friends, such as fried salted herring and hot dogs!



The third part of the camp took place up in the mountains, in the popular area of Transtrand and Sälen. Halfway we had the chance to meet the professional Dala horse carvers and painters at the Dala Horse Factory to get some more inspiration and an opportunity to ask questions about techniques on how to make our own horses even better. The new campsite was set up at the scout camp north of Sälen and we pitched tents, cooked, fished and hiked up bare mountains to see the views and cook on outdoor kitchens. We hiked through untouched forests in nature reserves and to a waterfall where a refreshing swim in the lagoon was offered to those who wanted to try it. On the way back to camp we found mushrooms to pick for dinner.

To wrap up the week the last visit was to the nature centre in Siljansnäs, Naturum of Dalarna. The same place that was visited by the foresters the previous year. A programme for the youth with a presentation of the newly opened exhibition about how the area was formed by a meteorite almost 400 million years ago. Of course a tour up the tower to see the view and the places that we visited for the last week.

Throughout the camp the participants helped each other and stayed together, most of them had some experience of outdoor life, but the variety of knowledge meant that everyone contributed and helped with what they knew. The beginners learned from the more experienced and it was easy for us as leaders to have such a group in the outdoors for a week. There were no major accidents or problems that could not be solved on the spot, which made it easy to monitor the whole camp. With another group, the problems might be different, so as a leader you always have to be prepared for what to do if there is an accident or if the overall atmosphere worsens. It's always important to keep a good mood and to be a role model for the younger ones, not to stress and to always have time to spend doing "nothing". This nothing can be the most valuable part of a camp like this, the time we get to reflect or be creative. Let nature speak and take its place in the programme!





## → HOW TO RUN AND PLAN A YOUTH CAMP

Another challenge is the financial situation which makes it difficult to organise and offer camps, which formerly used to be held almost every year for Swedish schools. But it's still possible to organise camps like the one we had in Dalarna. There are funds to apply for, both locally and nationally, and in many places there are Leisure Banks where you can borrow outdoor equipment at low or no cost, and it is also possible to collabo-

rate with local organisations, as we did with the Scouts. However, many of the low-cost campsites or course centres have become higher-standard tourist accommodation or conference centres and are not affordable for schools anymore. So now the teachers must look for other places to camp with a whole class and still be close enough to the most necessary services.

## → SUMMARY OF REFLECTIONS FROM THE ADVENTURE CAMPS

By reflecting on their experiences, participants gained valuable insights about themselves and the world around them. The adventure camps fostered personal growth, skill development, and lasting friendships while deepening their appreciation for nature and culture. The experience underscored the

importance of outdoor education and its positive impact on young people's development. Leaving mobile phones behind was initially a challenge, but ultimately, the freedom from the distractions allowed them to fully engage in the moment—an aspect they came to appreciate by the end of the camp.



## THE FEEDBACK FROM THE PARTICIPANTS

### Key learnings

→ **Practical skills:** Fire building, shelter building, navigation, first aid, wilderness survival, wood carving, fishing and more.

→ **Physical endurance:** Adapting to harsh weather conditions, long hikes and strenuous physical activities.

→ **Teamwork and cooperation:** Working together to achieve common goals, supporting each other and building strong bonds.

→ **Cultural understanding:** Learning about the history, culture and traditions, as well as the challenges faced by people in the past.

→ **Personal growth:** Overcoming fears, building resilience and developing a deeper appreciation of nature.

### Main challenges

→ **Physical discomfort:** Lack of basic amenities such as showers, uncomfortable sleeping conditions and long walks.

→ **Mental challenges:** Overcoming fatigue, frustration and homesickness.

→ **Team dynamics:** Ensuring that everyone felt included and supported, especially those who struggled with the physical demands.



## TEACHERS' INSIGHTS

→ The importance of teamwork and cooperation in overcoming challenges.

→ Clear and honest communication and consistency helps everyone to know what to do and what is expected of them. This builds trust, which is very important when hiking or camping in forests and mountains.

→ Be involved and set an example by participating fully in all activities.

→ Let the power of nature benefit to outdoor education for personal as well as social development.





## → FUTURE CONSIDERATIONS FOR ADVENTURE CAMPS

By considering all previously mentioned factors, we can create more accessible, sustainable, and enriching experiences for participants of all ages in forest education camps.

**Sustainability:** Always include all aspects of sustainability and work with this in the planning process together with the students/participants. How can we minimise our impact on nature during the camp? Can we measure our impact? What transports, accommodation and food do we use before and during the camp?

**Involvement and inclusivity:** Make sure everyone is involved and feels welcome. Present creative and engaging activities to keep participants interested and motivated. Always set a good example as an adult.

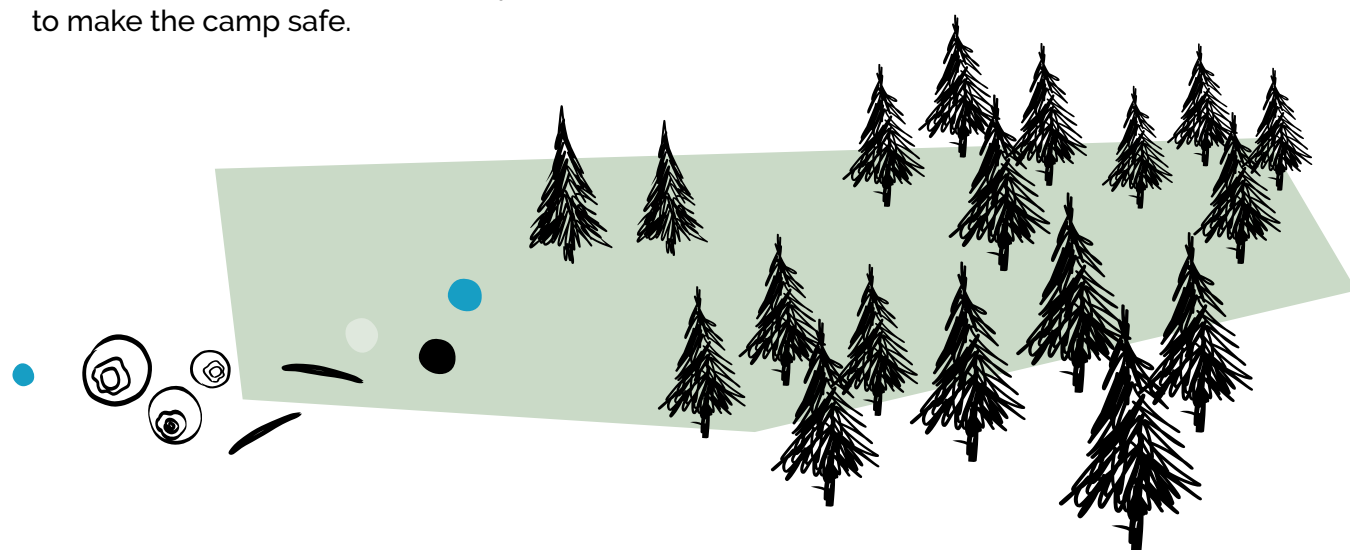
**Accessibility:** Make the camp accessible to everyone, both in terms of possible disabilities and culture aspects.

**Survival skills and risk assessment:** Make sure that the leaders, but also the participants, know how to deal with a crisis. Leaders should always do a risk analysis and go through different scenarios, first aid, basic survival skills and know each other's skills and experiences to make the camp safe.

**Financial challenges:** Explore affordable options for camp locations, such as partnering with local organisations. Apply for funding and grants to make camps possible and accessible to all.

**Equipment and clothing:** Make sure everyone has the right clothing and equipment, don't presume the participants to know what they need or that they can afford to buy what they don't have access to. As part of the sustainability aspect, you can lend or give ideas on how to get the necessary equipment without buying new things. For example, is there a leisure bank, like a library for outdoor equipment, that you can recommend?

**Technology:** What technology do you need and why? Is there electricity or not at the camp site, is it possible to charge the electrical equipment needed? How can participants be prepared for days without mobile phones?





# ACTIVITIES AND LESSON PLANS



## LEARNING TO IDENTIFY A TREE & CREATE A CHARACTER

### A SENSORY EXPLORATION IN THE FOREST

By Classroom without walls, Nature  
School, Sweden

#### OBJECTIVES:

- To strengthen the connection with nature by activating all senses.
- To develop cooperation, communication and empathy through a peer exercise.
- To get to know the place.
- To encourage curiosity and a sense of discovery in nature.
- To create a deeper understanding of the unique character of trees and their role in the ecosystem.
- To link the experience to social sustainability by reflecting on the support we need when we have a disability and how we interpret nature depending on the senses we use.

#### MATERIALS NEEDED:

- Blindfolds
- Loupes or magnifying glasses
- Character charts
- Optional: Field guides, insect books, camera

#### PROCEDURE:

1. Divide the group into pairs. Decide where to start and define boundaries if necessary (e.g. using paths, markers or natural boundaries).
2. One in each pair is blindfolded and cannot see. The one who can see acts as a guide. chooses a tree and then leads the partner to the tree by using both verbal instructions and physical guidance. Gently place the forearm under the blind partner's forearm for support.
3. The blindfolded student then explores the tree using all senses except sight. How does the bark feel? How big is it? What makes this tree special? Does it have a special smell? Does the tree have a taste? Encourage students to really notice the tree and its immediate surroundings.
4. Then the guide leads the blind student back to the starting point, perhaps by a different route to make it more challenging!
5. Back at the starting point it's time to remove the blindfold and try to find the way back to the same tree. If it is difficult, give clues! If the player succeeds, change roles and choose a new tree to explore.
6. Interview the tree: When both trees have been found you go back to your tree and make an interview. What can you learn by seeing, feeling and imagining the tree's situation and life? Use the questionnaire if you want to and write down the answers you get.
7. Meet up in new pairs or small groups and tell each other the story of the trees. Then in pairs choose one of the trees and look for someone that lives in or next to the tree!
8. Create a character: Work in pairs or small groups. Choose one of the trees and examine it closely with a loupe or a magnifying glass. Are there any signs of life? Insects, small animals, bird nests? Use the character chart to create a unique character based on the tree and its inhabitants. In colder seasons, when it may be difficult to find insects or traces of them, the tree itself can be the character.



## REFLECTION AND QUESTIONS:

→ Gather for a reflection session. Share experiences, thoughts and feelings about the activity.

→ How did it feel to be blindfolded and dependent on your partner? Was the guide helpful and did they give clear instructions. What could be improved next time?

→ Discuss what it was like to experience nature in a different way.

→ How did this activity affect your relationship with nature?

→ How do humans have a positive and negative impact on nature?

→ How can we contribute to a more sustainable future by learning about trees and the life within them?

## FURTHER EXPLORATION AND LEARNING

→ Use the characters as inspiration to write stories, poems or plays.

→ Create a collaborative exhibition about "your" trees and characters.

→ Use field guides, insect books or the internet to learn more about the tree and the species that live in and around it.

## TIPS

→ Be clear about the safety instructions and emphasise that this activity is for cooperation and creativity.

→ Adapt the activity to the age and prior knowledge of the group.

## INTERVIEWING A TREE

### SAMPLE QUESTIONS:

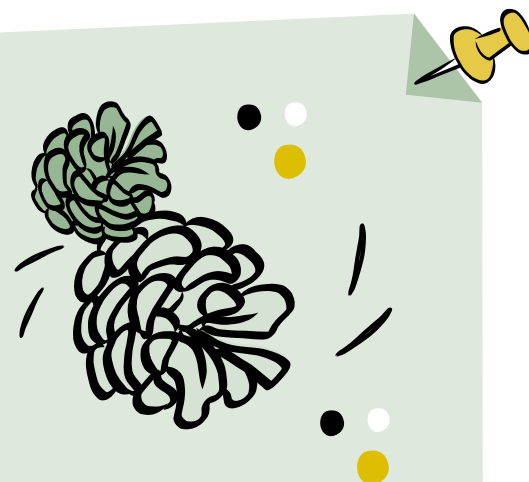
- What is your name?
- How old are you?
- How did you get here?
- Do you know what it was like here before?
- Can you describe yourself?
- Do you have any family nearby?
- Has anything unusual happened to you?
- Do you lose your leaves in autumn? Why do you do that?
- What do you think will happen to you in the future?
- Can you give me any advice about the forest?
- Does anyone else live with you?

### CREATE A CHARACTER

Use the chart to create a personality from something that lives in or near the tree, many of the questions can also be used to create a personality from the tree itself!

My name is ...

I am a...



## PHYSICAL APPEARANCE:

- Number of legs:
- Wings:
- Eyes:
- Length:
- Shape:
- Sex:
- Age:

## PERSONALITY:

What am I like? Who am I? Describe my personality and characteristics. For example: talents, weaknesses, strengths, interests.

## NEEDS:

- What do I need?
- What do I eat?
- How do I communicate?
- How do I live, where do I find shelter?

## SOCIAL LIFE:

- Family, friends, enemies, neighbours
- More about me:
- Important events in my life
- Dreams about the future
- My secrets
- What do I do in winter/summer/spring/autumn?
- Do I lack anything?
- Do I have too much of anything?
- Worst thing that could happen to me
- The best thing that could happen to me
- My self-image
- My job
- Habits, good or bad



## WHO HAS THE RIGHT TO THE FOREST?

### ABOUT THE VALUES IN NATURE

By the Falun Nature School

### OBJECTIVE:

→ To stimulate thinking and discussion about the complex issues of ownership, public access, responsibility and the right to exist in relation to the forest.

→ To increase the understanding of different perspectives and interests related to the forest.

→ To develop the students' ability to argue, reason and reflect on ethical dilemmas.

→ To link the discussion to social sustainability and the students' own responsibility for nature.

### MATERIALS NEEDED

→ Cards, small pieces of paper, with the names of different stakeholders or actors in the forest (e.g. mushroom picker, hunter, spruce bark beetle, tick, child, king, forestry company, biologist, moose, wolf, tourist, landowner, squirrel, forest worker, bird of prey, reindeer herder, me, grandmother, etc.)

→ Strings or clips to hang up the cards with.





## PROCEDURE

1. Begin with a short discussion about the forest: What does it mean to us? What different interests are linked to it? Explain that we are going to do an exercise to explore these questions further.
2. Hand out the cards, one per person, and point out to keep them to themselves in the beginning. Explain that each piece of paper represents a stakeholder or an actor (person, animal, plant, etc.) who is in some way connected to or has an interest in the forest.
3. Find a tree with low hanging branches, preferably a young spruce.
4. Ask the students to consider how much "right" their actor has to the forest. Does anyone "own" the forest more than anyone else? Is there anyone who has no 'right' at all?
5. Then everyone hangs their card in the tree, high up if they think the actor has much right to the forest, low down if considered little or no rights.
6. When all the cards have been hung up in the tree, the group reflects about the placement and discusses whether they agree or disagree. The aim is to reach a mutual agreement, the card can only be moved by the person who put the slip up at the first place.

## VARIATIONS

- Adjust the size of the group according to the age and experience of the pupils.
- Work in pairs and let them discuss and decide together how high or low to place the card.
- Divide the class into two groups, each with its own tree, and give each group the same set of cards. When both groups have put up their cards, they can switch trees and see how the other group has reasoned.
- Have the pupils take on the roles on the cards and create a debate.

## FOLLOW-UP AND FURTHER EXPLORATION

- **Rights and responsibilities:** Discuss the difference between having a 'right' to the forest and having a 'responsibility' for it. Who is responsible for the management of the forest, for its survival and for ensuring that people can visit it?
- **Dilemmas:** Present different dilemmas related to the forest (see examples below). Let the groups discuss and argue for different solutions.

## EXAMPLES OF DILEMMAS:

- A landowner wants to cut down an area where protected flowers grow. What can be done?
- There are plans for a new building in a forest where the children usually play. Can they influence the plans?
- A path in the forest is overgrown and inaccessible. Who is responsible for maintaining it?

Link to social sustainability: How can we treat and use the forest in a sustainable way? How can we take into account the needs of both humans and nature?

## PRACTICAL TIPS:

- Be aware that there are no "right" or "wrong" answers to this exercise. Its purpose is to stimulate reflections and discussion.
- Create a safe and permissive atmosphere where all students feel comfortable sharing their opinions.
- Encourage students to argue and justify their positions.
- Link the discussion to current events and social issues.

Good luck with an exciting and educational discussion about the forest!

## BAT & MOTH – AN ECHOLOCATION GAME

By teacher Gaidis Riekstiņš-Maure from in Latvia

Did you know that bats use sound to hunt? Bats aren't blind, but at night their ears are their most important tool. They make sounds as they fly, and the echoes tell them about everything around them – even the size and shape of a tiny insect and which way it's flying! And one bat can eat thousands of insects in a single night!

This incredible system is called echolocation, the same system used by dolphins.

And now it's time for you to experience how it works when bats hunt, but in a fun, active way!

## OBJECTIVES

- To understand how bats use echolocation to find prey.
- To experience the challenges and successes of navigating by sound.
- To develop listening skills and spatial awareness.
- To have fun and learn through playing!

## MATERIALS NEEDED

- Blindfolds (one per "bat")

## PROCEDURE

1. Gather the group in a circle.
2. Choose one pupil to be the 'bat' and another to be the 'moth' (a tasty snack for the bat!). Both of them enter the circle.

3. The 'bat' puts on a blindfold and the echolocation begins: The 'bat' now must use his 'echolocation' skills to hunt down the 'moth'.

4. The Bat and Moth Dialogue: To echolocate, the 'bat' simply says 'Bat!'. The "moth" must immediately respond with "Moth!" This simulates the echo bouncing off the moth and back to the bat.

5. Track the prey: The bat will quickly realise that the more times it says "bat", the more times the moth has to respond. This gives the bat more information about the location of the moth, which helps it to track the prey.

6. Tag! You're eaten! When the bat touches the moth, the round is over. Choose new players and start another round.

## GAME TIPS

- Encourage the bat to listen carefully to the changes in the moth's voice as they move around in the circle.
- Remind the 'moth' to respond immediately when they hear 'bat'.
- Emphasise that the game is for fun and learning - lots of near misses and laughter are part of the experience!
- You can vary the game by adding more moths or obstacles within the circle. For example, another pupil could be a tree and respond to the bat's signal by saying "tree"!







**This active game brings the science of echolocation to life and makes learning about bats both fun and memorable!**



## FOLLOW-UP AND FURTHER LEARNING

- Discuss how echolocation works for bats in real life.
- Find out about other animals that use echolocation.
- Explore the importance of sound for navigation and communication.
- How do we find our way in the forest? Are there signs in nature that can help us? How do we use maps and compasses to find our way?



## CREATE YOUR OWN GREEN ART – CHLOROPHYLL PAINTINGS

**FROM SKOGEN I SKOLAN,**

**Forest in Schools, Sweden**

This activity offers a hands-on and creative way to learn about photosynthesis while creating beautiful works of art. Your students will remember this experience for years to come!

### MATERIALS:

- White cotton fabric (2x2 decimetres for small paintings, or larger pieces of fabric for larger projects)
- 1 hammer or heavy stone per group
- Green leaves, grass or other plant material with chlorophyll
- A hard surface, such as a tree stump or board

### INSTRUCTIONS:

1. Divide into small groups or work individually
2. Gather materials: Collect different kinds of green leaves and grass. The more variety, the more interesting your results will be! Make sure you are allowed to collect materials on the site.
3. Prepare the surface: Each group needs a flat, hard surface, such as a tree stump or a piece of wood.
4. Tap and colour: Place the leaves on the surface in the pattern of your choice and cover them with a piece of cloth. Then gently tap the material with a hammer or stone. The chlorophyll from the plant will transfer to the fabric, creating beautiful patterns.
5. Dry and frame: Allow the paintings to dry completely before framing.

### TIPS:

- Try different plants and arrangements, various patterns and different kinds of leaves, flowers and grass. How many colours can you create?
- Compare different plants: Which plant gives the most colour? Which plant makes the most detailed pattern?
- Experiment with different fabrics: Try using linen, silk or even paper.

## LEARN MORE ABOUT PHOTOSYNTHESIS:

While making your chlorophyll paintings, talk about photosynthesis. Explain that the green pigment chlorophyll is essential for plants to make their own food. Plants use sunlight, water and carbon dioxide to make oxygen and sugar. The oxygen is released into the air and is essential for life on earth. The sugar provides energy for the plant to grow.

## DISCOVERING LIFE IN DEAD TREES

### AN OUTDOOR INVESTIGATION

**By Hamar Nature School, Norway**

This activity goes well with "Interview a Tree" and "Create a Character", but here the focus is on finding a dead tree and discovering the life in it!

**AIM:** To become "deadwood detectives" and discover the amazing life hidden in dead trees!

**MATERIALS:** Loupes or magnifying glasses, notebooks, cameras (optional), field guides or identification apps.

### PROCEDURE:

1. Find an area with dry or dead trees, standing or lying on the ground.
2. Divide in groups and each group goes out to find a dead tree or a fallen log. This is the research site!

**3.** Become detectives and awaken all your senses to observe and investigate! Use magnifying glasses to examine the bark, wood and any other interesting features. Can you find any signs or traces of insect activity (holes, tunnels, food)?

**Look:** Carefully examine the bark, wood and any cracks or crevices. Look for signs of life such as insects, birds or other animals. Can you see any holes, tunnels or traces of food or other activity? Does anything grow on the tree such as fungi, lichen or moss?

**Touch:** Gently touch the bark, wood and surrounding soil. What does it feel like?

**Listen:** Can you hear any sounds coming from the dead wood?

**Smell:** Do you notice any particular smells?

**4.** Record your observations in notebooks, take photographs or sketch any interesting findings.

### THE DEADWOOD DETECTIVE REPORT:

#### Hypothesis:

→ What organisms do you think live in or on this dead tree?

→ How do you think this tree died?

→ What will happen to this tree over time?



## CONNECT TO THE BIGGER PICTURE:

→ Ecological connections: Discuss how dead trees play an important role in the ecosystem by providing habitat for different animals such as birds, insects and spiders, the cycle of nutrients and preventing soil erosion.

→ Human impact: Discuss how human activities can affect the availability of dead wood in the environment.

→ Conservation: How can we protect and conserve deadwood habitats?

## RESEARCH & SHARE:

Use field guides, identification apps or online resources to learn more about the organisms you observed.

Share your findings with the class. What amazing discoveries did your team make?

**Let's go exploring!**



How much time do we have? What is the cost of the ingredients? What tools and equipment do we need? Where can we make a fire or cook in an outdoor kitchen? Are we allowed to make a fire outside? Don't forget to check the weather conditions!

Present the equipment that the pupils will be allowed to use and whether there are any rules and safety aspects on how to use it. Present what needs to be done, when it needs to be done and what the pupils should do when they have finished the task.

## WHAT QUESTIONS CAN YOU WORK ON AFTERWARDS? WHAT CAN YOU REFLECT ON? FOR EXAMPLE:

→ Are there any special dishes that are only eaten outdoors?

→ Could it be different in other countries?

→ Is this bread like any other bread you have eaten before? Look for more recipes and bake other flat breads – maybe from different parts of the world? Does people on all continents bake similar flat breads?

→ What age should young people start taking responsibility for preparing the food they eat?

→ What is the environmental impact of the food we eat? How can we make the food we eat more sustainable, with a smaller carbon footprint?

## COOKING AND EATING IN THE FOREST

Outdoor cooking is a good and tasty opportunity to work interdisciplinary, and food is something we all need playing always brings people together. When you are active outdoors, the food is especially tasty and cooking together involves many skills and cooperation. Baking bread is one of the basics and can, for example, be made by using a grill or pan over an open fire, or on an outdoor stove to make the tasty and funny "tummy bread"!

**Time needed: 40 minutes – 2 hours**

### WHAT EQUIPMENT IS NEEDED?

Except for ingredients according to the recipe you will need a pan to bake the bread in. Remember to prepare so that you can take care of your own rubbish, maintain hygiene and work safely.

You may want to do some of the preparation inside, such as mixing the dry ingredients in a bigger bag or pot, then take it outdoors. Or scoop into smaller bags indoors and hand them out before going out, each student is then responsible for their own breadmaking.

Let the planning be part of the implementation. What is reasonable to cook together?



## TUMMY BREAD (ABOUT 10 PIECES)

- 6.5 dl wheat flour
- 5 dl wholemeal flour
- 1 sachet dry yeast (equivalent to 50g fresh yeast)
- 0.5 dl sugar
- 1 teaspoon of salt
- Bread spices (fennel, aniseed) or other herbs or spices to taste

Mix all the ingredients in a large bowl, then divide into smaller plastic bags, one per person. Pour 1.5 dl of the flour mixture into each bag, leaving a little extra in case some of the dough gets too sticky or wet. When it's time to bake, add 0.5 dl of warm water (about 50 degrees Celsius) and knead the dough in the bag. By kneading the bag the hands will remain clean and dry! The dough will be quite 'dry' and that's fine.

Tie up the bag and place it under your clothes next to your belly and leave it to rise for at least 25 minutes. Belly bread rises with the help of body heat, do you know why it has to be warm for the dough to rise?

Once the dough has risen, lightly knead the dough in the bag. Take the dough out of the bag and flatten it out to about 1cm thin or less. Bake on the stove or in a frying pan without oil/fat. Enjoy freshly baked with a little butter, or use it as a plate to stack other foods as a forest sandwich!



## FIND YOUR TREE

Prepare cards with pictures of different types of trees. You can choose a variety of different tree species or several of the same type, depending on how many trees the students are familiar with and whether you want to use the activity to divide them into groups or not.

The students form a circle, close their eyes and listen carefully to the sounds of the forest. What and how many sounds can they hear? While they are listening to nature, the teacher goes around and attaches a card with a tree on it to each student's back, e.g. using clothes pegs.

When everyone has a card on their back, the students open their eyes. What sounds

did they hear. What happens to our senses if one of them is taken away? Would they have heard the same sounds if they hadn't been blindfolded?

Now it's time to figure out the name of the trees! The students walk around and ask 'yes' or 'no' questions to try and figure out which tree they have. After asking a question, move on to the next person and ask a new question. Instead of asking a question, the students can also guess what tree it is. Once you've guessed correctly, they must remove the card and help and help others by answering their questions.

Then the students find their friends, either the same type of tree or trees that are related in some way. For example, conifers or broad-leaved trees, trees that grow where we are or trees that stay green all year round.



## SECRET PICTURE

Let's be creative and at the same time communicate in mathematics!

Divide into pairs, each pair then looks for a number of objects in nature, it should be an even number so they can then divide the objects equally between them. For example, 8 cones, 4 sticks, 6 leaves, and 2 stones. After sharing the objects, the pairs sit down with their backs to each other. One then creates a pattern with their natural objects and then describes in detail what it looks like and the other makes a similar art work on their side.

Alternatively, the teacher can hand out cards with symbols or words that the creator of the picture should relate to, like geometrical concepts or other words and themes to

start with. You can decide whether or not to have a frame. If so you can start by making frames out of sticks or by marking with string.

When finished, compare the pictures and reflect on the process. Then change roles and add maybe more objects or make a new creation using the same objects.

Then switch roles and add more items or make a new creation with the same items.

Tips: Make sure everyone knows what they are allowed to pick and take from the forest, use only loose objects and remember to never break branches from trees or pull off the bark from living trees. Also check that the students know the difference between left and right and ask them to use mathematical concepts and words like centimetres and decimetres. Finally, remember to tell that it's not a competition and give the pairs time enough to describe their works in detail.

## MORE IDEAS AND ACTIVITIES SHARED IN THE PROJECT

→ **Seasonal observations:** Exploring how the forest changes throughout the year, identifying signs of spring and autumn, and studying the effects of weather on the forest.

→ **Sensory experiences:** Engaging the senses through touch, sight and sound. Observe textures, colours and patterns in nature.

→ **Active learning:** Encouraging outdoor activities, games and experiments to stimulate curiosity and engagement.

→ **Using nature as a resource:** Explore the natural world through activities such as bug hunts, tree identification and nature journaling.

→ **Environmental Awareness:** Promoting environmental awareness, including waste reduction, conservation and sustainable practices.

→ **Literacy and Numeracy:** Integrating academic skills into outdoor learning, such as counting, measuring and storytelling.

→ **Social-emotional learning:** Developing social skills, cooperation and empathy through group activities and nature-based experiences.

## DISCOVER NATURE'S DIVERSITY

**AIM:** Go on a "treasure hunt" for the colour nuances and discover the details and variation in nature. You don't need to know the names of all the species to explore the diversity of the forest.

### MATERIALS:

Colour charts, for example,

- Autumn colours
- Spring colours
- Nuances of green

**TIP:** Attach double-sided tape on each colour. That way, whatever the pupils find, they can attach it to the paper. (NB! Make sure that the small pieces of plastic covering the tape do not remain in nature.)

**PROCEDURE:** Look around in nature and find colours that are as similar as possible to the colours on the paper.





## RESOURCES:

- Spireserien: A website with cross-curricular and sustainable teaching materials. Spireserien
- Naturfagsenteret: Norway's science centre; issue 1/23 focuses on sustainability education in science subjects. Naturfagsenteret: No. 1/23: Bærekraftundervisning
- Loop Miljøskole: A school dedicated to teaching about forests, nature and environmental issues. Forside – Loop Miljøskole
- FN-Sambandet: The Norwegian Association for the UN; provides tips for teaching social studies and environmental issues. FN Sambandet
- Bærekraftsmålene - regjeringen.no: The Norwegian government's website on the Sustainable Development Goals, with teaching resources for social studies and science. Bærekraftsmålene – regjeringen.no
- Sustainable Development Goals – resources for teachers: A collection of resources for teachers. Sustainable development goals – resources for teachers
- Eco-Schools: Provides lesson plans for teachers on climate, water and forests. Lesson plans for teachers - Eco Schools
- Oxfam Policy & Practice: Provides practical and cross-curricular activities related to the environment and sustainability. The Sustainable Development Goals: A teacher's guide - Oxfam Policy & Practice
- Lære med Skogen (Learning with the forest)
- Naturen som læringsarena (Teaching outdoors)
- Natursekken (Education for sustainable development)
- Naturvårdsverket, allemansrätten <https://www.naturvardsverket.se/en/topics/the-right-of-public-access/>
- Naturskoleforeningen <https://www.naturskola.se/> (Swedish Nature School Association, links to research and contacts)
- Teacher guides <https://www.outdoorteaching.com/en/>
- Skogen i skolan <https://www.skogeniskolan.se/>

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