

Moved by Nature – School-children’s experiences of outdoor activities in nature

Elina Hasanen and Kati Vähäsarja



Elina Hasanen
elina.hasanen (at) gmail.com

Kati Vähäsarja
kati (at) vahasarja.fi

Översättning: Lingsoft Language Services

Translation: Lingsoft Language Services

Cover photo: Lassi Puhtimäki



ISO 14001

© Metsähallitus, Vantaa 2019

ISSN-L 1235-6549
ISSN (online) 1799-537X
ISBN 978-952-295-251-6 (pdf)

Moved by Nature

– School-children’s experiences of outdoor activities in nature



Leverage from
the EU
2014–2020



EERIKKILÄ
BRINGING OUT THE BEST SINCE 1949



FORSSA



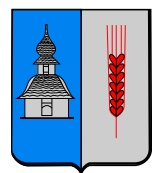
HUMPPILA



JOKIOINEN



TAMMELA



YPÄJÄ



DOCUMENTATION PAGE

PUBLISHED BY	Metsähallitus	PUBLICATION DATE	29.7.2019
COMMISSIONED BY	Metsähallitus	DATE OF APPROVAL	
CONFIDENTIALITY	Public	REGISTRATION NO.	
AUTHOR(S)	Elina Hasanen and Kati Vähäsarja		
TITLE	Moved by Nature – School-children’s experiences of outdoor activities in nature		
ABSTRACT	<p>Physical activity in nature promotes well-being and growth among children in many ways but the activity has seen a worrying decline in recent decades. This study has generated knowledge on children’s experiences of different types of nature activities and on their relationship with outdoor activity.</p> <p>The study examined the experiences of 4th and 5th graders (n=81) who participated in the interventions of the Moved by Nature project (2017–2019). The main data of the study comprised a survey, which was conducted three times among the same four school classes after nature activity days held during different seasons, and interviews of 11 children. The quantitative analysis of the survey data was combined with the qualitative content analysis of the interview data.</p> <p>The experiences of the children during the nature activity days were very positive. The most meaningful experiences can be divided into three categories: 1) freedom, autonomy and adventure, 2) learning new things, challenging oneself and succeeding and 3) being together, friendship and community spirit. According to the results of the study, when organising nature activities, special attention should be paid to the balance between adult-led learning and self-initiated activity as well as to the meaningfulness of working together.</p> <p>Approximately 90 percent of the children felt that outdoor activity in nature was important to them in their daily lives. Nature and activities in nature provided the children with sensory experiences, peace, time for recovery and withdrawal as well as opportunities for freedom and playfulness and thus acted as a counterweight to schoolwork, the urban environment and screen time. Almost half felt that the amount of nature activities at school was too low. The intervention strengthened the children’s relationship with outdoor activity in nature by familiarising them with nature and various nature activities, by providing personal experiences of the well-being effects of nature and by supporting the children in finding meanings that were significant to them. The most important outcome for the children was the strengthening of friendships and the feeling of togetherness in the class. A significant observation of the study was that children felt that lack of time was preventing them from partaking in outdoor activities in nature in their daily lives.</p> <p>The results provide new information on the meanings and experienced effects of outdoor activities in nature as well as their role in the everyday lives of children. The study also provides justification for increasing the amount of nature activities at schools as well as for promoting outdoor activities in nature that family members can enjoy together. The results are useful when developing organised outdoor activity and services in nature aimed primarily at children and youths and when advancing nature activities for school classes.</p>		
KEYWORDS	children, nature, outdoor activity, physical activity, nature connection, physical activity environments, well-being, motivation		
OTHER INFORMATION			
SERIES NAME AND NO.	Nature Protection Publications of Metsähallitus. Series A 229		
ISSN-L	1235-6549	ISBN (PDF)	978-952-295-251-6
ISSN (ONLINE)	1799-537X		
NO. OF PAGES	107 s.	LANGUAGE	English
PUBLISHING CO.	Metsähallitus	PRINTED IN	
DISTRIBUTOR	Metsähallitus, Parks & Wildlife Finland	PRICE	

KUVAILULEHTI

JULKAISIJA	Metsähallitus	JULKAISUAIKA	29.7.2019
TOIMEKSIANTAJA	Metsähallitus	HYVÄKSYMISPÄIVÄMÄÄRÄ	
LUOTTAMUKSELLISUUS	Julkinen	DIAARINUMERO	
TEKIÄ(T)	Elina Hasanen ja Kati Vähäsarja		
JULKAISUN NIMI	Luonto lisää liikettä – Mikä innostaa kouluikäistä?		
TIIVISTELMÄ	<p>Luonnossa liikkuminen lapsena tukee monin tavoin hyvinvointia ja kasvua mutta on viime vuosikymmeninä huolestuttavasti vähentynyt. Tässä tutkimuksessa on tuotettu tietoa lasten kokemuksista erilaisista luonnossa liikkumisen muodoista sekä suhteesta luonnossa liikkumiseen.</p> <p>Tutkimuksessa tarkasteltiin Luonto lisää liikettä -hankkeen interventioihin (2018–2019) osallistuneiden 4.–5.-luokkalaisten lasten (n = 81) kokemuksia. Pääaineistona ovat kyselyaineisto, joka kerättiin samoilta neljältä luokalta kolmesti, eri vuodenaikoina järjestettyjen luontoliikuntapäivien jälkeen, sekä 11 lapsen haastatteluaineisto. Kyselyaineiston määrällinen analyysi yhdistettiin haastatteluaineiston laadulliseen sisällönanalyysiin.</p> <p>Lasten kokemukset liikkumisesta luontoliikuntapäivillä olivat hyvin myönteisiä. Merkityksellisimmät kokemukset voi jakaa kolmeen kokonaisuuteen: 1) vapaus, omaehtoisuus ja seikkailu, 2) uuden oppiminen, itsensä haastaminen ja onnistuminen sekä 3) yhdessäolo, kaveruus ja yhteishenki. Tulosten mukaan luontoliikuntaa järjestettäessä on hyvä huomioida etenkin aikuisjohtoisen oppimisen ja omaehtoisen toiminnan tasapaino sekä yhdessä toimimisen merkityksellisyys.</p> <p>Arkena luonnossa liikkumista ja olemista piti itselleen tärkeänä noin 90 prosenttia lapsista. Luonto ja luonnossa liikkuminen merkitsivät lapsille etenkin aistielämyksiä, rauhaa, elpymistä ja vetäytymistä sekä vapautta ja leikkisyyttä, tarjoten vastapainoa koulutyölle, kaupunkiympäristölle ja ruutuajalle. Lähes puolet piti koulun luontoliikunnan määrää liian vähäisenä. Interventio vahvisti lasten suhdetta luonnossa liikkumiseen tutustuttamalla luontoon ja siellä liikkumisen muotoihin, antamalla omakohtaisia kokemuksia luonnon hyvinvointivaikutuksista sekä tukemalla lapsille itselleen tärkeiden merkitysten löytämistä. Tärkeintä antia lapsille oli luokan kaverisuhteiden ja yhteenkuuluvuuden vahvistuminen. Merkittävä havainto oli, että lapset kokevat ajan puutteen estävän arjessa luonnossa liikkumista.</p> <p>Tulokset lisäävät tietoa luonnossa liikkumisen merkityksistä ja koetuista vaikutuksista sekä asemasta lasten arjessa. Tutkimus tarjoaa perusteluja lisätä koulun luontoliikuntaa sekä edistää perheiden yhdessä luonnossa liikkumista. Tulosten pohjalta voidaan kehittää lasten ja nuorten ryhmille suunnattua luontoliikunnan palvelutarjontaa ja koululuokkien toimintaa luonnossa.</p>		
AVAINSANAT	luontoliikunta, lapset, liikunta, luontosuhde, liikkumisympäristöt, hyvinvointi, omaehtoisuus		
MUUT TIEDOT			
SARJAN NIMI JA NUMERO	Metsähallituksen luonnonsuojelujulkaisuja. Sarja A 229		
ISSN-L	1235-6549	ISBN (PDF)	978-952-295-251-6
ISSN (VERKKOJULKAISU)	1799-537X		
SIVUMÄÄRÄ	107 s.	KIELI	englanti
KUSTANTAJA	Metsähallitus	PAINOPAIKKA	
JAKAJA	Metsähallitus, Luontopalvelut	HINTA	

PRESENTATIONSBLAD

UTGIVARE	Forststyrelsen	UTGIVNINGSDATUM	29.7.2019
UPPDRAGSGIVARE	Forststyrelsen	DATUM FÖR GODKÄNNANDE	
SEKRETESSGRAD	Offentlig	DIARIENUMMER	
FÖRFATTARE	Elina Hasanen och Kati Vähäsarja		
PUBLIKATION	Mer motion från naturen – Vad inspirerar barn i skolåldern?		
SAMMANDRAG	<p>Att röra sig i naturen som barn stöder på många sätt välfärd och tillväxt, men under senaste årtionden har detta minskat oroande mycket. I denna undersökning har man framställt information om barnens erfarenheter av olika former av att röra sig i naturen samt förhållandet till att röra sig i naturen.</p> <p>I undersökningen samlade man in erfarenheter av barn i 4–5 klassen som deltagit (n=81) i Mer motion från naturen-projektets interventioner (2018–2019). Som huvudmaterial används enkätmaterial som samlades in från samma fyra klasser vid tre tillfällen efter naturmotionsdagar som ordnades under olika årstider samt intervjumaterial av 11 barn. En kvantitativ analys av enkätmaterialen kombinerades med en kvalitativ innehållsanalys av intervjumaterialet.</p> <p>Barnens erfarenheter om att röra sig under naturmotionsdagarna var mycket positiva. De mest betydelsefulla erfarenheterna kan delas i tre helheter: 1) frihet, frivillighet och äventyr, 2) att lära sig nytt, utmana sig själv och att lyckas samt 3) samvaro, vänskap och sammanhållning. Enligt resultaten lönar det sig att särskilt observera balansen mellan vuxenledd inläring och frivillig verksamhet samt samarbetets betydelse för barnen när man ordnar naturmotion.</p> <p>Cirka 90 procent av barnen ansåg att det är viktigt för dem själva att röra sig och vara i naturen. För barnen betydde naturen och att röra sig i naturen speciellt känsloupplevelser, lugn, återhämtning och tillbakadragning samt frihet och lekfullhet, genom att erbjuda en motvikt till skolarbetet, stadsmiljön och skärmtiden. Nästan hälften ansåg att mängden naturmotion i skolan är för liten. Interventionen förstärkte barnens förhållande till att röra sig i naturen genom att göra naturen och olika former av att röra sig där bekanta, genom att ge personliga erfarenheter av naturens inverkan på välmående samt genom att stöda barnen i att hitta betydelser som är viktiga för barnen själva. Den viktigaste faktorn för barnen var att kamratförhållandena och samhörigheten i klassen förstärktes. En betydande observation är att barnen upplever att tidsbristen hindrar dem från att röra sig i naturen under vardagar.</p> <p>Resultaten ökar på informationen om betydelserna och de upplevda verkningarna av att röra sig i naturen samt naturens ställning i barnens vardag. Undersökningen erbjuder motiv för att öka på naturmotion i skolor samt främja familjers gemensamma naturbesök. Utgående från resultaten kan man utveckla serviceutbudet för naturmotion riktat till grupper för barn och unga samt skolklassernas verksamhet i naturen.</p>		
NYCKELORD	naturmotion, barn, motion, naturförhållande, motionsmiljöer, välfärd, inre motivation		
ÖVRIGA UPPGIFTER			
SERIENS NAMN OCH NUMMER	Forststyrelsens naturskyddspublikationer. Serie A 229		
ISSN-L	1235-6549	ISBN (PDF)	978-952-295-251-6
ISSN (ONLINE)	1799-537X		
SIDANTAL	107 s.	SPRÅK	engelska
FÖRLAG	Forststyrelsen	TRYCKERI	
DISTRIBUTION	Forststyrelsen, Naturtjänster	PRIS	

Contents

Foreword.....	9
1 Introduction	11
1.1 Promoting the well-being of children through outdoor activities in nature.....	11
1.2 The Moved by Nature project.....	13
1.3 Purpose of the study	14
2 Research Methods	15
2.1 Defining the research task	15
2.2 Research data	16
2.2.1 Survey data.....	16
2.2.2 Interview data	17
2.3 Analysis.....	18
3 The Moved by Nature Intervention.....	20
4 Children Participating in the Intervention.....	24
4.1 Background information	24
4.2 Local environment	25
4.3 Engagement in physical activities	26
5 Experiences of the Nature Activity Days.....	31
5.1 Physical activities.....	31
5.2 Other activity elements.....	36
5.3 On the central elements.....	45
6 Relationship with Outdoor Activities in Nature.....	50
6.1 Meaningfulness of physical activities.....	50
6.1.1 Role in everyday life.....	50
6.1.2 Meanings.....	54
6.2 Importance of natural environments	56
6.3 Outcomes of the Nature Activity Days.....	60
6.3.1 Inspiration to move about in nature	60
6.3.2 Outcomes as reported by the children.....	63
7 Significance of the Results.....	66
7.1 Central results and message.....	66
7.2 Limitations of the study and reliability.....	72
7.3 Applicability of the results and need for further research.....	73
References.....	76
Acknowledgements.....	81

APPENDICES

Appendix 1 Spring survey.....	83
Appendix 2 Autumn survey.....	88
Appendix 3 Winter survey.....	95
Appendix 4 Interview structure.....	104
Appendix 5 Answers to the item "I like to move about in nature, but do so fairly rarely because".....	105
Appendix 6 Answers to the item "Which things do you particularly enjoy when it comes to being and moving about in nature?".....	106

Foreword

The positive effects of nature on human wellbeing and health have been proven by research. In nature, you engage in physical activity almost without noticing it, and spending time in nature is refreshing and promotes recovery. Nature is an excellent setting in which children and young people can play and spend time in active pursuits with their friends. While young children find endless things to do in nature, young people are also happy to go out walking and cycling in their free time.

A lifestyle in which physical activity – and in this case, physical activity in nature – plays a large role is something we pick up early on, and in the best case, carry on throughout our lives. For example, if you get used to cycling to school through woods resonating with birdsong, selecting this mode of transport will also feel right later in life.

At school, nature is not only an important topic to learn about but also an excellent learning environment. The Schools on the Move programme, which was part of the Government's key project on knowledge and education in 2015–2019, encourages pupils' and students' action-based learning. Nature offers action-based learning at its best – before you even realise it, you are engaging in physical activity and taking on challenges to your motor skills, your self-esteem and social skills improve, your every-day concerns are forgotten and you feel mentally refreshed. On top of everything else, nature offers you fresh air as well as peace and quiet. It is thus pleasing to see that teaching in the open air has made clear strides in recent years. The new National core curriculum of 2016 has contributed to laying a solid foundation for physical activity and learning in nature as part of the school day.

Outdoor activity in nature is an excellent opportunity for our population to be physically active. This was also noted in the Government's report on physical activity policy, the first ever document of its kind in Finland, submitted to Parliament in autumn 2018. In addition to wellbeing and health benefits, the value of green exercise is increased by the fact that it is often a free or rather inexpensive way of participating in low-threshold physical activity. Stepping out of your front door and heading to nature is also a valuable act for the environment.

Information underpinning the promotion of wellbeing, physical activity and outdoor activity in nature has grown in importance in the 2010s. We also need reliable information on the benefits and meanings of children's physical activity in nature and ways of promoting it further. I extend my warmest thanks to the Moved by Nature project for its meritorious work aiming to promote children's outdoor activity in nature and building up its knowledge base.

Sanni Grahn-Laasonen
Minister of Education

1 Introduction

1.1 Promoting the well-being of children through outdoor activities in nature

In western societies, both concerns and wishes are expressed with regard to children's outdoor activities in nature. The social developments of recent decades have manifested themselves in the everyday lives of children and youths through a reduction in physical activity, a change of living environments to more urban landscapes and a more technology driven lifestyle. According to the School Health Promotion study of the National Institute for Health and Welfare (Terveyden ja hyvinvoinnin laitos 2018), school-age children increasingly feel that their well-being is poor. There is concern about the health and well-being of children and young people and increasingly also about the potential deterioration of their relationship with nature (Louv 2010).

Different parts of the world have witnessed a decline in outdoor activities in nature and its potential consequences for reducing well-being (Bragg et al. 2013, Louv 2010). Strengthening of the children's relationship with nature is seen as an important opportunity for promoting well-being, as numerous studies reflect the positive impact of nature and green spaces on human well-being (Department of Environment, Food and Rural Affairs 2017, Gascon et al. 2017, Hartig et al. 2014, Parliamentary Office of Science and Technology 2016). Nature-based interventions can generate new models for promoting health and wellbeing due to the manifold physical, social and psychological well-being effects (WHO 2017). Natural environments are often perceived as calming, stress relieving and mood enhancing. Nature enables free play and a sense of freedom and independence (Bragg et al. 2013). These and other characteristics of natural environments have a positive effect on a child's behaviour and emotional development (Amoly et al. 2014).

It would be only a slight exaggeration to say that over the decades, natural, everyday and self-initiated nature activities of children

have changed to sitting in the back seat of a car and participating in structured indoor activities (see, e.g., Soini 2011). The majority of Finnish children are engaged in organised physical activities through sports clubs, for example, but the amount of overall physical activity is still too low (LIKES Research Centre 2018). More than half of 11-year-olds do not get enough exercise to maintain their health, which means that they engage in physical activities for less than the recommended one hour per day (Kokko et al. 2019). A significant part of children's waking hours is spent sitting (Husu et al. 2019).

Research shows that organised physical activities in a sports club are beneficial for a child's well-being and health in many ways (Eime et al. 2013). However, belonging to club is not possible for everyone. Additionally, not everyone may find it a rewarding way of being physically active. Many children are excluded from these activities due to their high costs. Many also feel that organised physical activities are too competitive (Hakanen et al. 2019). The fact that everyday environments do not encourage independent physical activities can often hamper being socialised into an exercising lifestyle (Broberg 2015).

Of Finnish children and youths between the ages of 2 and 16, 26 percent of the boys and 16 percent of the girls are overweight or obese (Mäki et al. 2018). Mental health problems of young people are increasing in all Nordic countries (Gissler & Seppänen 2017). Both inactivity and being overweight are key risk factors for chronic diseases and poor mental health (Hoare et al. 2016). A large amount of screen time has been shown to have a strong connection to young people's depressive and anxiety symptoms as well as to weaker self-esteem and mental health (Hoare et al. 2016). On the other hand, there is also evidence that the well-being of young people is not reduced by all types of screen time (Orben & Przybylski 2019).

An increasing amount of time is being spent in front of various screens. Currently, the screen time of more than half of Finnish

children and youths amounts to more than two hours a day on at least five days a week (Kokko et al. 2019). The experiences previously offered by natural environments that used to be a more integral part of children's everyday lives are now increasingly being replaced by the virtual stimuli of smart devices. Digitalisation is in every way a part of the everyday life of the 21st-century generation. The connection between people around the country and the globe created by social media enriches and expands their world. At the same time, it is felt that the connection children and young people have with nature has deteriorated (Lovelock et al. 2016, Louv 2010, Mtapa et al. 2015).

Natural environments and outdoor activities support the growth and well-being of children and youths in numerous ways (e.g. Engemann et al. 2019, Vanaken & Danckaerts 2018). It is important not only for those who do not take part in organised sports but also for children and youths who are actively engaged in physical activities, as it helps prevent stress injuries and aids mental recovery. The diverse surfaces and elements of

nature provide a suitably challenging environment that encourages many types of physical activities and helps to develop motoric skills. Finnish children have a lot of hobbies but also often stop going to them during puberty (e.g. Martin et al. 2019). Self-initiated physical activities carry over into the daily lives more often than organised hobbies (Aira et al. 2013, p. 78). The positive experiences that outdoor activities in nature create thus importantly support the continuity of an active lifestyle even after engagement in sports as a hobby ends.

There is little research on the changes related to Finnish children's nature activities and their relationship with nature, but the change is similar to the one taking place in other western countries: outdoor activities in nature are on the decline. A recent concern is also the attitude towards physical activities in general, as research has shown that children and youths find physical activities less personally significant than before (Koski & Hirvensalo 2019).

The well-being effects of nature are linked to the strength of the connection to



Nature activity days were organised for 4th and 5th graders as part of the Moved by Nature project. The autumn nature days included paddling, among other activities. Photo: Päivi Pälvimäki / Metsähallitus.

nature (Capaldi et al. 2014). The connection to nature bears a relation to a physically active lifestyle. Positive nature experiences in childhood strengthen a person's connection to nature, which also supports the adoption and maintenance of a physically active way of life as an adult (Calogiuri 2016). Nature is the most popular exercise environment for Finnish adults (Korpela & Paronen 2011). If the engagement of children and youths in outdoor nature activities continues to decline, it may also have a knock-on effect on future adults' physical activity and thus also on the health and well-being of the population. Studies have shown that having a green living environment as a child already reduces the risk of psychological disorders in adulthood (Engemann et al. 2019).

The weakening of the connection children and youths have to nature may also have an impact on environmental well-being in the long term. Children who have had little contact with nature may have less appreciation for the environment, which may have an impact on the willingness to take care of the environment as an adult. Recent reports on global warming (IPCC 2018), the record-breaking rate at which biodiversity is declining and the threat of extinction of animal and plant species (Diaz et al. 2019) also concern children and young people in many ways. Firstly, environmental threats may raise concerns about the future and thus affect the psychological well-being of children and youths. Secondly, children's and youths', that is, the future decision-makers', connection to nature or the lack thereof may have far-reaching consequences. The well-being of the environment also has a broad impact on people's well-being, so it is very important to make sure that a positive relationship with nature is created in childhood.

1.2 The Moved by Nature project

The same way the weakening of the young generation's connection to nature can be seen to be the result of mainly adult-led developments, so can the formation and strengthening of children's and young people's nature

connection also be seen to be dependent on the activities of adults. A key role is played by parents, grandparents, teachers, instructors and coaches as well as professionals and decision-makers in those sectors of society that influence children's living environments and opportunities for being active.

To ensure that physical activities in nature become a part of the children's way of life, nature must first be accessible in the daily life, either independently or with the help of an adult. Secondly, children and youths need to be able to find nature activities personally meaningful. At its best, moving about in nature considerably increases the child's vitality, quality of life and happiness.

The Moved by Nature project was designed with this background in mind. The project was carried out by Parks and Wildlife Finland together with its partners in 2017–2019. The main funding for the project was provided by the European Regional Development Fund (ERDF), national funding was provided by the Regional Council of Uusimaa and the administrator was the Regional Council of Häme. Apart from Metsähallitus, additional funding was provided by the main partner Eerikkilä Sport & Outdoor Resort and the other partners, the municipalities of Forssa, Humppila, Jokioinen, Tammela and Ypäjä. The project was created by the joint strategic will of Metsähallitus and Eerikkilä Sport & Outdoor Resort to promote the well-being of children and youths by increasing the amount physical activities in nature. The project implemented the Healthy Nature, Healthy People Programme of Metsähallitus, the 'Nature that Moves You' plan of the tourism unit of the Forssa region municipalities and the objectives of the Häme regional programme for the development of nature-oriented well-being services.

The main objective of the Moved by Nature project was to advance the health and well-being of children and youths by promoting their physical activities in nature. Six main measures were taken to achieve this goal: 1) developing new operating models and methods for assessing the impact of outdoor nature activities on the well-being children and youths; 2) reorganising the Häme Nature Centre into Finland's first nature activity

centre for children and youths; 3) promoting the accessibility and recognition of services related to nature activities in the Forssa region; 4) strengthening the multi-sector cooperation for promoting nature-based well-being; 5) increasing and utilising the knowledge of the health and well-being effects of nature activities in the development of services; and 6) developing communication and marketing materials and digital services that inspire children and youths to partake in outdoor nature activities.

Developing operating models for nature activities of children and young people and assessing of the impact on well-being was the key measure, as it supported all the objectives of the project. To achieve this, the study utilised an intervention, for which four pilot classes were recruited: one from Helsinki, one from Tampere and two from Tammela. The pilot classes had a total of approximately eighty 9–12-year-old children from grades 4 and 5. The task of the school classes was to participate in the nature days held at the nature sites in the Forssa region and to actively report on their experiences using various methods. The nature activity days were developed to produce assessment data on the children's experiences that may promote well-being and also to support the operating models and services of nature activities geared towards children and youths.

1.3 Purpose of the study

This study examines children's (n = 81) experiences of the nature activity days held as part of the Moved by Nature project in 2018 and 2019 and investigates children's relationship with outdoor activities in nature. Other project operations are reported in a separate final report.

In this study, the project's objective of promoting the health and well-being of children and youths underlies the search for experiences that children enjoy when being and moving about in nature. The guiding principle is to highlight the voice of the children

taking part in the intervention. The research aims to advance the opportunities and organisation of nature activities that are meaningful for children and that promote their well-being as well as to increase understanding of children's attitudes towards outdoor activities in nature.

The study answers the following questions: 1) how was moving about in nature experienced by the children; 2) how did children feel about the other elements of the activities; and 3) what was the children's relationship to moving about in nature after the nature activity days.

In order to assess the activities, survey data was collected from the children of the four pilot classes and their parents, the teachers of these classes and the service providers involved in the realisation of the pilots after each nature activity day. The main data of this study consists of the surveys conducted among the children. To complement the surveys, the children were also interviewed. The period under study comprises approximately one year, from the spring of the fourth grade (in 2018) to the late winter of the fifth grade (in 2019).

The second chapter of this research report introduces the research task in more detail and presents the methods used to carry out the task. The third chapter introduces the intervention under study, that is, the content of the nature activity days organised for the children. The fourth chapter looks at the survey replies in order to determine the types of children that were involved in the activities. This provides an understanding of the foundation upon which experiences of the activities were built and of what the main informants of the study were like in relation to Finnish children in general. The fifth chapter presents the answers to the first two research questions on the basis of the data and the sixth chapter answers the third question. The seventh, final, chapter discusses the key findings and the significance of the research and proposes recommendations regarding the promotion and research of nature activities.

2 Research Methods

2.1 Defining the research task

This study examines children's experiences of outdoor activities in nature. The research interest combines the scholarly objective of increasing the understanding children's relationship with nature activities and the practical objective of developing nature-related opportunities and services for children and youths.

Based on previous studies, outdoor activity in nature is considered to increase the well-being of children and young people in an important way. The socialisation of children and young people into being active nature-goers is seen as something desired. Therefore, the aim is to create a close relationship between children and youths and outdoor activities in nature. In other words, the desired effect is to have the children form an attachment to nature activities and the social world of those activities so that nature would constantly provide them with something of importance. This is considered to require a subjective experience of the personal importance and meaningfulness of nature activities as well as favourable surrounding conditions. (See Itkonen & Kauravaara 2015, Koski 2004 and 2009, Simula 2012). Thus the focus of the study is to seek experiences and meanings related to nature activities that are important to children and to consider them against the background of cultural, social and physical environments.

The main targeted activities of the study were activities initiated and organised by adults. These were mainly camp-like school days, which were put together by adults and which included opportunities for independent activities. The analysis does not limit itself to the properties of the structured activities. Instead, a more broad approach is adopted in examining the children's experiences of outdoor activities in nature and the conditions that enable good experiences. This is considered to promote children's and youths' engagement with nature in ways that are meaningful, both under guidance and in a self-initiated manner.

In this study, reviewing experiences and meanings refers to reviewing the understandings, feelings and attitudes expressed by the children in the surveys and interviews and interpreting their backgrounds and significance. The selection of subjects for examination has been based especially on the research of sport and exercise psychology and social sciences in sport. The individual's internal, interpersonal and structural factors selected for scrutiny are considered to affect the socialisation into nature activities (cf. Lovelock et al. 2016) and provide information on the child's continuously developing relationship with nature activities. Children's experiences and meaning-making are considered to form upon a foundation of previous personal experiences. More generally, they are also considered to be indicative of the status and value of nature activities in the contexts in which children live (cf. Simula 2012).

The majority of the issues under examination are based on the self-determination theory which concerns individuals' internal motivation and basic psychological needs (Deci & Ryan 2008) and which was the basis for the planning stage of the Moved by Nature project. In accordance with the theory, the project aims to inspire children to move about in nature by offering children positive experiences of self-direction, that is, autonomy, of competence and ability, and of belonging to a place and community. These issues have been found to have a strong link to internal motivation. The intervention has also aimed at increasing the readiness for change with regard to the children's nature activities. Readiness for change refers to an experienced willingness and intention to increase the amount of outdoor activities in nature (Prochaska & DiClemente 1983). In this study, the contexts of children's experiences and meanings refer to children's physical activity and living environment, nature as a physical environment, nature activity days as social activities with peers and adults as well as to outdoor activities in nature and their relevance as a part of childhood and physical activity culture.

In this study, physical activity and moving mean voluntary movement that is not limited in terms of physical strain. The amount of movement was not measured using objective gauges. The nature activity days also included activities that did not involve being physically active, such as meal breaks and spending the night in a tent. These are also included in the examination to the extent that they were essential to the children's experiences. The study also uses the concept of outdoor activities in a sense that also includes time spent being sedentary (cf. Sievänen & Neuvonen 2011, p. 12–13).

Nature as a physical environment is defined broadly. The definition extends from an untouched wilderness to urban green spaces, which may also contain constructed elements but mainly consists of natural elements (cf. Pasanen & Korpela 2015). Nature was not defined for the informants during the collection of the material. Based on the material, there were differences between children in terms of what physical environments were considered nature (see chapters 4.2 and 6.2).

2.2 Research data

The research data were collected using survey forms, internet surveys and interviews. The main data of the study is summarised in Table 1.

2.2.1 Survey data

The main data comprised surveys for the children who participated in the interventions. The survey was conducted three times, a few days or weeks after the nature activity days. The children responded to the survey during class at school. At the end of May 2018, 75 children responded to the first survey. In September and October 2018, 77 children from the same classes responded to the second survey. A total of 74 children responded to the third survey, but the answers of only 63 children who also took part in the event are included in the analysis in their entirety. The investigation involved 81 individuals, since some new children were included in the groups in the middle of the intervention (see chapter 4.1).

Almost all of the children involved in the intervention also responded to the survey. The reason for not responding was ascribed to illness or other absence from school.

The study also utilised other survey data collected in the Moved by Nature project: three internet surveys for the children's parents ($n = 16-25$), an initial survey ($n = 67$) and a final survey ($n = 30$) for the parents, three internet surveys for classroom teachers ($n = 5-6$) and three internet surveys for the service providers who took part in the organisation of the pilots ($n = 1-4$). The role of the material was to support the formation of a comprehensive understanding and interpretation of the results. The parents' material included their understanding of how their child had experienced the nature activity days and whether the participation had had an impact on the family's habit of moving about in nature. The questions put to the teachers concerned, among other things, practical arrangements, the attractiveness of the programme, the relationship between the structured and unstructured activities, and the achievement of various objectives. Service providers were asked about issues related to realisation, such as operations of the group and needs for development.

The researchers also participated in some of the nature activity days as observers and also took part in some of the activities. The role of observation in the research was to increase understanding and to partly guide the selection of interviewees.

The children's survey forms are enclosed as Appendices 1, 2 and 3. The questions were open and multiple choice questions in form. Each of the three forms initially contained roughly the same questions on the children's physical activities, outdoor activities in nature, the significance of outdoor recreation areas and values. The third survey also contained questions on nearby nature and the social relationships of the class. For the sake of comparability, the questions correspond partly with those found in the survey forms of the national LIITU study on the physical activity of children and youths.

Experiences of the nature activity days were firstly charted with a series of questions,

Table 1. Collection methods, times and quantities of main research data.

Materials	Collection method	Time of collection	Quantity (n)
Children's 1st survey	Survey	May 2018	75
Children's 2nd survey	Survey	Sept–Oct 2018	77
Children's 3rd survey	Survey	March 2019	63 (74)
Children's interview material	Semi-structured interview, individually and in pairs	Feb–March 2019	11 children / 7 interviews

in which the same verbal alternatives to each item were given on an applied Likert scale (lowest estimate: “Not fun!”, highest estimate: “Ace!”). The set of questions included elements that described each organised activity, such as “Practising using a tinderbox to make fire” and “Finding check points”, as well as various areas of experience such as “Competition” and “Working together”. There were five to fourteen items to be assessed per action. Each action also included the item “Other, please specify?”.

After the series of questions, the effects of the nature activity days on the motivation to engage in nature activities were investigated with a multiple choice question. The final part included open questions regarding the role of nature activities in everyday life and the respondents' views on the experienced and future nature activity days.

2.2.2 Interview data

The purpose of the interviews was to understand which experiences that are meaningful to children and which factors contribute to their meaningfulness. In addition, the interviews explored some interesting and unclear issues that had emerged during the analysis of the survey. There were altogether seven interviews, and they involved a total of eleven children from two of the pilot classes. The interviews were carried out after the winter nature activities day during school hours, in one school two days and in the other school one-and-a-half weeks after the nature activity day. Three of the interviews were individual interviews and four were done in pairs.

The interviewing method was a semi-structured interview. The interviews followed a loosely planned interview structure (Appendix

4), which contained questions concerning both the nature activity days and everyday life. In a series of questions regarding the nature activity days, the interviewees were asked what they considered their most important experiences, how they felt about being together, moving around in different ways and taking part in the event. With regard to everyday life, the interviewees told why and when they engaged in outdoor activities, how they understood nature as a physical environment, what they considered to be different forms of moving about in nature and in some cases what the attitudes of their families were. The interviewees also had the opportunity to talk about other issues that were important to them, and the topics that were important to a child could be discussed more than the other topics.

The interviewees were first selected from two different types of environment: the school of a rural area and a city centre school. Secondly various children with different ethnic backgrounds, different backgrounds in physical and nature activities were selected for the interviews on the basis of the survey data.

The ethical guidelines related to the collection of the interview data required that the guardians be asked permissions for the children's participation, after which the children themselves were also allowed to decide on their participation and the archiving of the data. When asking the children about participation in the interview, the children were allowed to choose whether they would be interviewed alone or with a friend of their choice. This was done to make the situation more pleasant for the children and to balance the power structure between the adult researcher and the children. The final group of interviewees was determined on the days

of the interview; four of the children selected had fallen ill, which is when the researcher inquired about the willingness of the other children to participate.

Due to research ethics, the children have been anonymised in this report. For example, the proper names and other possible issues leading to identification have been removed from the quotations. Results that deal with differences between the pilot classes mention the schools by name, but individual children cannot be identified from the findings. The language of the interview excerpts has by and large been standardised both for improved readability and protection of the subjects.

Five of the interviews were conducted in Finnish and two in English. The duration of the interviews varied between 26 and 48 minutes. The interviews were recorded and for the most part transcribed. The transcribed data amounted to 74 pages (22,200 words).

2.3 Analysis

The study combined quantitative and qualitative methods of analysis. The quantitative analysis of the questionnaire data formed the foundation upon which the qualitative content analysis of the interview data was conducted. Both resources were used to answer all three research questions.

The children's survey responses were converted to data in the SPSS analysis program. Firstly, the survey contained categorical variables such as the amounts of exercise and assessments on the activities and elements of the nature days. Categorical variables were represented by a categorical percentage or number of responses. The respondents were divided into groups on the basis of background variables such as how much physical or nature activities they engaged in, gender and school. The responses of the different groups were compared through crosstabulation.

Secondly, the data contained open answers. These included, for example, lists of favourite pastime activities and descriptions of what the respondent particularly likes about moving about and being in nature. The open answers were presented using categorisation and

quantitative content breakdown. The categorisation mainly utilised prior research data on the significance of physical activities and exercise environments for Finnish children and youths and their relationships with nature (e.g. Cheng & Monroe 2012, Hakanen et al. 2019, Hasanen 2017, Kaivola & Rikkinen 2003, Koski & Hirvensalo 2019, Paukkeri 2014).

Among the respondents, there were some children who had not taken part in the nature activity day when it had been organised, due to illness for example. Only their responses concerning the description of nature environments around the home and their open responses concerning the nature activity days more generally have been included in the analysis.

The role of the interview data was to complement the observations made on the survey data and to highlight things that the children found meaningful. Thus, the interview data amplified the children's voices in the study. The method used to analyse the interview data was a qualitative content analysis (e.g. Miles et al. 2014). After the transcription, the researcher briefly recorded their main observations on each interview to form an overall picture of the content. The data was categorised in the Atlas.ti program by coding. During the coding, the data was simultaneously categorised into main and sub-categories. The classification was partly data-driven and partly driven by previous research data (see references above) and theory (e.g. Deci & Ryan 2008).

The main categories of the data were principally pre-selected for the interview structure and partly determined by the themes and areas of experience that emerged from the data. The pre-selected categories included, for example, "moving about", "being together" and "nature as a place", and the data-driven ones included "learning" and "nature vs. screen time". The subcategories were formed in a data-driven manner. Thus, the subcategories of the main category "being together" were determined as, for example, "friends" and "class spirit", and the subcategories of "nature as a place" included, for instance, "nature as plants and animals" and "nature-related fears".



The autumn nature activity days included hiking in the Liesjärvi National Park under the supervision of an instructor, among other things. Photo: Minna Jokinen / Metsähallitus.

The categorised interview data was firstly used to complement particularly interesting issues that were left incomplete or unclear in the analysis of the survey data. Secondly, the interview data was interpreted as such, outlining the core themes of the children's experiences and their significance. The role

of the interview data was emphasised in the interpretation of the outcomes of the intervention and the role of the intervention in effecting change. In the absence of a control group, the apparent change between the survey data was not considered an effect of the intervention.

3 The Moved by Nature Intervention

The Moved by Nature project organised nature activity days for the pilot classes during three different seasons, spring, autumn and winter, in the course of one year. The events were organised separately for each of the four classes.

The venues of the nature activity days mainly included nature in its altered and unaltered state but also the partly constructed environments at Tammela and Jokioinen in Kanta-Häme. The venues are shown on the map in Figure 1. The majority of the children involved were not familiar with the nature sites.

The nature activity days had more or less the same content for each class. In order to make the activities as diverse as possible and to have them support the objectives of the project, the programme structure was mainly designed by the project personnel. The details of the activities were mainly designed by the

service providers, so that the programme also catered for the development of new service products. The autumn and winter programme took the children’s feedback and wishes from the spring into account and utilised the observations made on the children’s experiences. The planning of the programme was limited by the service providers’ contribution, the project budget and the weather conditions. For example, overnight accommodation, paddling, fishing and learning campcraft were carried out in the autumn according to the children’s wishes, and in the winter an attempt was made to include more free time in the programme.

The activities included skills related to moving about in nature, knowledge of wildlife, outdoor activities that were physically demanding to a varying degree, art and culture as well as learning about the cultural history of the sites. The activities were largely

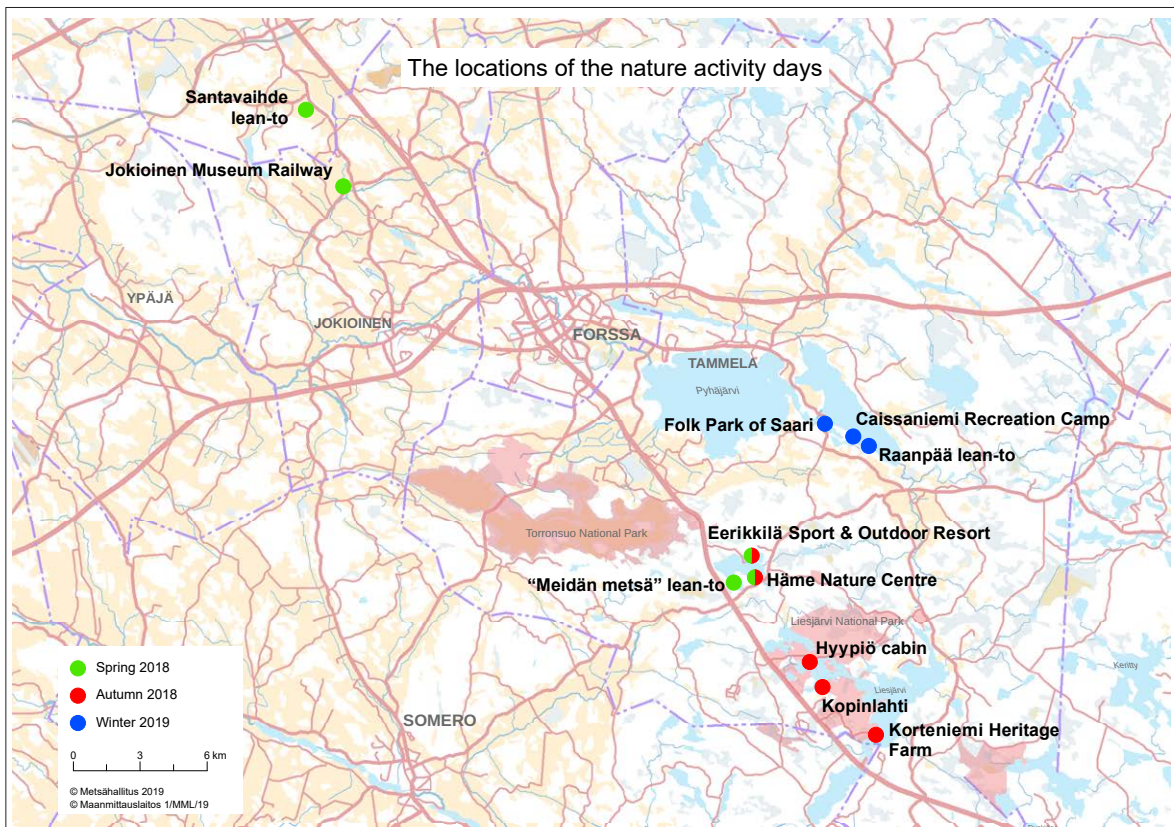


Figure 1. The locations of the nature activity days.

structured, but the days included free time and the children were able to choose various things within the activities. In some of these activities, children followed instructions and functioned in nature largely independently, with a partner or with a peer group, without supervision but receiving assistance if necessary. Local service providers, mainly comprising nature and wilderness guides and students, were responsible for the guidance and teaching of the activities and other items on the programme. They were accompanied by 1–2 teachers from each school, the personnel of the Moved by Nature project (project manager and planner), and in some classes a classroom assistant.

Table 2 presents the content of the nature activity days in the spring of 2018. The events were held in May. The classes of the Tampere International School and Vuoniitty School took part in two days of activities and the nearby schools of Riihivalkama and Tammela participated in one nature activity day.

Table 3 presents the content of the nature activity days in the autumn of 2018. The event took place in September and October. For two classes the event began at a heritage farm, while the other two classes did the nature challenge first.

Table 4 shows the content of the event in the winter of 2019. The nature activity day was held in February.

Table 2. The content of the spring nature activity day.

Name of activity	Description of activity	Place	Duration	Exceptions
Forest mystery	Children were divided into groups and they were told a background story about the Häme Ox Road in the Middle Ages. The groups were sent to find checkpoints and solve their tasks in the order determined by a qualification round. After the groups had returned, the tasks were reviewed and instructions were given for a further task. The groups took off every 30 seconds based on the scoring of the first round. By solving the follow-up task, the team received a tip on the location of the treasure. The first group to find a treasure was the winner. Finally, the instructor told about the treasure and its connection to the neighbouring Ruostejärvi lake.	Vicinity of the Nature Centre	1.5 h	
Paddling and walking tour	After the introduction, the class was divided into two groups; one group began to paddle and the other group started a hike through the forest. The paddling group received operating and safety instructions before taking off. Each canoe had an instructor and 1–2 children. Halfway through, the canoes were used to form a raft. The hikers and the instructor walked approximately 1.5 km to the “Meidän metsä” lean-to at Toralahti. Along the way, the group climbed rocks and tree trunks, observed the surrounding nature and was introduced to natural products and their use, for example, in preparing food or making fire. Along the journey, the group got to cross a body of water with the help of a hand-operated cable ferry. At the lean-to at Toralahti, activities were continued in the same groups. The hikers began making survivor bracelets by braiding. The paddling group practised using a camp cooker and used it to make hot chocolate. Both groups completed the same activities. Weather allowing, there was also the possibility to swim. This was followed by break for eating a packed lunch and a return to the shore of the Nature Centre either by paddling or hiking through the forest.	From the Nature Centre, Ruostejärvi recreation area	3–4 h	
Activity on the way to Nature Centre	Most of the 2-km journey consisted of walking freely and interaction between students and instructors. The students were instructed to take wildlife pictures with their own mobile phones. Three types of photographs were taken: close-ups of, for example, plants, landscapes and nature selfies. Practising making knots according to instructions; clove hitch, bowline knot, sailor’s knot. Practising making fire by using a tinder box (when a forest fire alert did not apply).	Along the hiking trail	45 min	
Pump trolley trip	The staff of the museum railways gave instructions on the use and safety of pump trolleys. Pump trolleys were used to travel to the Santavaihe lean-to and back, approximately 4 km one way. A break for eating a packed lunch and resting took place at the lean-to. The railway traversed a rural landscape in the midst of fields and meadows. The pupils, 4 per pump trolley, were responsible for moving the trolley by pumping.	Jokioinen Museum Railway	2 h	Only Tampere and Vuoniitty
Evening activity – traditional games	The instructor gave the class instructions on playing traditional games, such as “prönttö” or “kyykkä”.	Yard and inner hall	1 h	Only Tampere and Vuoniitty
Staying overnight	Staying overnight in the rooms of the Sport Institute			Only Tampere and Vuoniitty

Table 3. The content of the autumn nature activity days.

Name of activity	Description of activity	Place	Duration	Exceptions
The Korteniemi Heritage Farm	Welcome speech and introduction. Stories about life in the old times and the uses of the old buildings. Getting to know the main room of the Korteniemi main building, smoke sauna and drying barn as well as the sheep and hens in the farmyard. Finally, more relaxed activities, tug-of-war, boot throwing and walking on stilts.	Korteniemi Heritage Farm	2 h	
Lunch	A brief introduction to local food and the importance of choosing what to eat. Presentation of the day's menu and eating outdoors.	Korteniemi Heritage Farm	1 h	
Hiking in the national park	Hiking for approximately 5 km. Several stops and drinking breaks along the way. Stopping to greet the cows of Korteniemi on the forest pasture along the way. At other stops, the guide told short stories that included topics such as determining which way is north based on an anthill, fire fallow and the ice age. A longer lunch break was held at Kopinlahti, bread rolls and juice were served. The journey continued towards the campsite. Some of the pupils from Riihivalkama and Vuoniitty continued from Kopinlahti to Hyypiö by paddling and accompanied by a guide.	Liesjärvi National Park, Korteniemi–Hyypiö	2.5–3 h	The Tampere school hiked the route from Hyypiö to Korteniemi, and no meal break was held at Kopinlahti.
Arrival at and setting up camp	The campsite was located near Hyypiö's rental cabin. The guides explained how to set up camp and how to choose a suitable place for pitching a tent. The children were divided into tents and the tents were set up together, and the guides provided assistance.	Hyypiö (Tammela School: The Korteniemi Heritage Farm)	1 h	
Dinner by the campfire; Breakfast by the campfire	Dinner and other camp meals were eaten on the lake shore at the campfire site off the Hyypiö cabin. The children used their own outdoor tableware and, after use, did the washing up themselves at a washing up spot set up nearby.	Campfire site off the Hyypiö cabin (Tammela: Korteniemi campfire site)		Those Riihivalkama school pupils who wanted to could participate in the cooking.
Evening programme	In the evening there was an opportunity to go to the sauna and swim in the lake. Girls and boys had their own turns in the sauna. While others were in the sauna and swimming, there was an opportunity to go angling or paddling. Taking part in the programme was voluntary, no participation was required. For evening meal, it was possible to roast sausages and make pancakes on an open fire. By 10 pm, everyone was supposed to have gone to sleep. The children stayed together in several different tents. Adults slept in their own accommodations in different parts of the camp. The path to the outhouse was marked with snow stakes, and a few lanterns also illuminated the terrain.	Campfire site off the Hyypiö cabin (Tammela: Korteniemi campfire site)		Because of the wind, the students of the Tampere School did not get to go paddling in the evening. A trip to a nearby cave was organised for them instead.
Nature Challenge course	The children were divided into pairs. The pairs took off every 5 minutes; while waiting for their turn, the others played football and basketball, for instance. The fact that the course was not a competition and that the most important thing was to have fun and take care of your partner was stressed at the starting point. All the checkpoints had an adult, who gave instructions and advice on how to reach the next target. The first task was picture orienteering: the children were told to find their way to a place shown in a photograph, located in the vicinity of the Sports Institute. Finally, the children were given a map, based on which they continued to the next checkpoint. There, the task was to identify plants. The correctly identified plants provided the children a series of numbers that could be used to open a locked chest next to the checkpoint. The chest revealed a GPS device showing a route that the children could follow to find the next checkpoint. The task was to cross the sound on an SUP board together with a partner. Shoes and possible other items were placed in a rowing boat, which followed the SUP board during crossing. If crossing on the SUP board was not appealing, the alternative was to hop on the rowing boat. On the other side of the water obstacle, the journey again continued on foot towards the next checkpoint. The next task was to first find the three stones that the previous pair had hidden in the vicinity. When the stones were found, they were used to solve a task related to rock paintings. The stones showed an image of a rock painting found somewhere in Finland, and this needed to be combined with the text describing it. After completing the task, the pair received instructions on finding the next checkpoint. Now the couples arrived at the Häme Nature Centre, in front of which fatbikes were waiting for them. The bikes were ridden through a short trail, after which the journey continued on foot to a nearby lean-to. The task was to set fire to an aluminium foil tin using a tinderbox. From the lean-to, the journey continued through the forest back to the Nature Centre along a route marked in the terrain. The last task concerned everyman's rights and was done on computers at the Nature Centre.	Terrain from the Sports Institute to the Nature Centre	2 h	Due to rain, some children from Vuoniitty were not able to set off or they had to stop midway. Vuoniitty and Tampere did not cross on the SUP board due to strong wind; the rowing boat transported the pairs to the other side.

Table 3 continues

Name of activity	Description of activity	Place	Duration	Exceptions
Circus School	Various coordination and juggling exercises. Balls and flower sticks as aids. Mainly individual exercises, some exercises were carried out with a partner.	Inner courtyard of the Nature Centre	1 h	
Getting to know the ponies	A peaceful introduction to the ponies and how to communicate with them. Included two ponies, one free in a circular enclosure, the other connected to the fence with a lead rope. One child at a time spent approximately 5 minutes in the enclosure getting acquainted with the pony that was free. The time spent in the enclosure included observations on what the pony was communicating and trying to have the pony follow without a lead rope. Depending on the situation, the pony was also led. Others scratched and brushed the other pony with the instructor's guidance. In addition, there was an opportunity to ask questions related to ponies and horses.	Vicinity of the Nature Centre	1 h	
Archery	Shooting arrows at target boards, two at a time while others cheered.	Vicinity of the Nature Centre	1–1.5 h	Only Tammela

Table 4. The content of the winter nature activity day.

Name of activity	Description of activity	Place	Duration	Exceptions
Snowshoeing	After some introductory guidance, the group travelled a short distance to a campfire site where the group was divided in two. Children familiarised themselves with snow shoes and were given the opportunity to move about independently in snow shoes in the forest. In the afternoon, after lunch, snowshoeing continued from the folk park towards Caissaniemi, guided by another guide. A break took place at the Raanpää lean-to along the way.	Folk Park of Saari–Caissaniemi Recreation Camp	approx. 3 h in total	The Riihivalkama school travelled along a different route due to a strong wind, and the break was kept shorter in the forest.
Dragging the sledges	During the day, the students transported their backpacks in sledges. There was one sledge per two or three students and the students took turns pulling the sledge.	Folk Park of Saari–Caissaniemi Recreation Camp	approx. 1–3 h in total	Riihivalkama and Tampere left the sledges already in the folk park.
Capture the flag	An adaptation of the Yugigasse game, in which the group was divided into two teams. The objective of the teams was to capture the opponent's flag and bring it to their side. In addition, opponents could be dropped from the game by hitting them with a ball or pea bag as in dodgeball.	Folk Park of Saari	1/2–1 h	
Miniature log candles	A few students at a time used the saw to create a mini log candle amidst other activities. One used the saw and the others helped to keep the log in place. A longitudinal cut had already been made to the log. If there was time, feather sticks were made to help with fire making.	Folk Park of Saari	1/2 h	
Having a moment to calm down in the forest	Moving from the campfire site to a suitable place sheltered from the wind in the forest. Taking a moment to calm down following the instructions of the guide. Sitting down or standing against a tree, listening to surrounding sounds with the eyes closed, focusing on breathing and acknowledging it.		1/2 h	Tammela and Riihivalkama only
Building with snow	Boxes, shovels and buckets were used. After a short briefing, the group divided itself into small groups. The groups built snow forts and other structures as they wanted.	Caissaniemi Recreation Camp	1.5 h	
Winter swimming	The sauna and winter swimming were voluntary activities. To avoid getting too cold while waiting, a couple of children at a time came from the sauna to the opening in the ice. Dipping took place under guidance. Girls and boys went to the sauna separately, so while one group was in the sauna, the other group had dinner under the barbecue shelter.	Caissaniemi Recreation Camp	1.5 h	Due to ice conditions, at Vuoniitty, rolling around in the snow and, at Tammela, dipping in the paddling pool.

4 Children Participating in the Intervention

This chapter describes the background, surrounding environment and engagement in physical activities of the children who took part in the intervention, based on survey responses. This provides an understanding of the foundation upon which the experiences concerning the activities were built and explains what the main informants of the study were like in relation to Finnish children in general. This information can be used to assess the applicability of the findings of the study to other cases.

4.1 Background information

The spring survey was completed by 75 schoolchildren, who were in fourth grade at the time. The autumn survey was completed by 77 schoolchildren, then as fifth graders. A total of 74 children responded to the winter survey, but the answers of only 63 children who also took part in the event are included in their entirety. The number of respondents changed slightly from one survey to another. Four respondents who had responded to the spring survey were left out from the autumn survey and the autumn survey had six new respondents. 18 children who had previously participated in the nature activity day were absent from the winter event, and there were no new participants.

Entire school classes took part in the activities and responded to the surveys. The gender distribution was similar in all three surveys; the boys represented a slight majority. The distribution is shown in Table 5.

The four school classes that were recruited for the project came from city schools in Helsinki and Tampere and from the population centre and village school of Tammela. All the students in the classes participated in the activities and responded to the surveys, except those who were absent due to illness or other reasons.

In the first two surveys, the largest group of respondents by school was formed by the pupils of the Vuoniitty Comprehensive School in Helsinki; they amounted to approximately 30 percent of the respondents. The Finnish International School of Tampere and the Tammela School Centre each provided approximately one quarter of the respondents, and the smallest share of the pupils came from the Rihivalkama School, less than a fifth of the respondents. In the third survey, the majority of the respondents came from Tampere, the pupils of the Vuoniitty and Tammela School Centre amounted to about one quarter, and



Four entire school classes took part in the Moved by Nature intervention and in the study. At the time of the winter nature activity day, they were fifth graders. Photo: Lassi Puhtimäki.

Table 5. Gender distribution of respondents by survey.

Gender	Spring survey	Autumn survey	Winter survey
Boy	53 %	57 %	54 %
Girl	47 %	43 %	46 %

Table 6. Number of respondents per survey by school.

School	Spring survey	Autumn survey	Winter survey
Riihivalkama School	14	14	11
Tammela School Centre	19	20	15
The Finnish International School of Tampere	20	20	20
Vuoniitty Comprehensive School	22	23	17
Total	75	77	63

the pupils of the Riihivalkama still constituted less than one fifth of the respondents. In other words, the majority of the respondents was comprised of the pupils of the city schools (Table 6).

The class of the Finnish International School of Tampere represented a markedly multicultural group of children and youths. The teaching language of the school is English, and the pupils comprise children of foreign families who reside in the region either temporarily or permanently, children of Finnish families who have returned to the country and other children wishing to attend an international school for other reasons (Tampereen kaupunki 2019).

4.2 Local environment

With regard to the community structure of the living environment, the respondents represent a diverse group even though the group is quite limited in geographical terms. The school's location does not fully describe the living environment of the children.

The Riihivalkama School is located in the village of Riihivalkama at Tammela, about eight kilometres from the Tammela centre and seven kilometres from the town of Forssa. The school's immediate environment is characterised by fields and a major road. The children who took part in the intervention from Riihivalkama lived 0–20 kilometres away from the school, in other words, their homes were located in different parts of the rural area.

The venues of the nature activity days were located approximately 2–15 kilometres from the school.

The Tammela School Centre is located at the centre of a municipality of approximately 6,000 inhabitants. The vicinity of the school centre includes a sports park, which has, for instance, tracks in the forest. The children from the Tammela School Centre lived no more than a few kilometres from the school, that is, near the centre of the municipality.

The Finnish International School of Tampere is located in the centre of Tampere. More than half of the school's participants said that they lived more than 5 kilometres from the school, and many homes were located more than 10 kilometres away. In other words, the living environments of the school children extended from the city centre to a wide range of environments.

The Vuoniitty Comprehensive School is located in the district of Vuosaari, in Eastern Helsinki. Of the participants from Vuoniitty, almost everyone reported that they lived within three kilometres of the school. In the Vuosaari district there are several extensive outdoor recreation areas, and the seashore is a kilometre's walk from the school.

The children's surroundings were charted in the winter survey by asking how much nature the children felt they had near their homes and by inquiring what that nature was like. In the survey, "being near" referred to a place that could be easily accessed by walking or cycling. At the same time, the ques-

tion gave an idea of the types of places that were considered nature, as 'nature' was not defined in the form. The analysis includes all the 74 children who answered the survey in the winter.

Almost half of the children felt that there was "a lot" of nature close to their home (Table 7). More than a third of the children felt that there was "quite a lot" of nature near their home. A tenth of the children had "only a little" nature nearby. Only two of the respondents felt that there was no nature near their home. The proportions of respondents differed slightly between the schools. Compared to other schools, a larger proportion of the participants from Riihivalkama felt that their home was close to a lot of nature. Only the participants from Vuoniitty included children who replied that there was no nature near their home.

The most common nearby nature type mentioned by the children was forest. Four out of five respondents reported that there was a small or a large forest or several forests near their home. A lake, the sea or a shore was close to nearly one fifth of the respondents. Hill or rock and field were also mentioned several times. Wetlands and paths were also mentioned. Park, trees or vegetation were mentioned by some of the children who felt that there was only a little or quite a lot of nature near their home. One of the children also listed constructed places, such as a swimming pool, while another mentioned cycleways. In other words, there were slight differences in what environments the children considered nature. Some children's surrounding environments included vast wilderness areas. For some, the existence of trees, that is, city greenery, was enough to provide an experience of the closeness of nature. Based on the children's responses, they

do not largely differ from the average Finn in that, on average, their nearby forest is a short walking distance away (Sievänen & Neuvonen 2011, p. 76).

4.3 Engagement in physical activities

Children's engagement in and attitudes towards physical activities were examined with several questions. They concerned attitudes towards the school's PE classes, pastime and school break activities, getting to school, the amount of physical activity during the week and sports club memberships.

The answers to the question "Do you like PE classes?" were very positive (Figure 2). On average, half of the children liked PE "usually" or "always!". More than 90 percent gave this answer in the autumn survey, and in the winter survey the percentage was slightly less than 90 percent.

In the spring, approximately 85 percent of the respondents mentioned some physical activity among the ways in which they **spent their breaks at school**. In the autumn, some physical activity was mentioned as the preferred break activity by some 75 percent of the respondents. In the winter, some physical activity was mentioned by 70 percent of the respondents. The most popular physical activities did not significantly change between the surveys.

Most often the children mentioned two different types of physical activity among the three preferred ways of spending breaks at school. The most popular activities included games such as tag and different forms of dodgeball, ball games such as football and basketball and other physical activities such as swinging, climbing, running and walking. "Playing" was also mentioned by a large

Table 7. Nature close to home as experienced by the respondents, percentages of respondents by school.

Is your home close to nature?	Riihivalkama	Tammela	Tampere	Vuoniitty	All
There's a lot of nature near my home.	79	47	46	35	49
There's quite a lot of nature near my home.	7	47	41	48	38
There's only a little nature near my home.	14	7	14	9	11
There's no nature near my home.	0	0	0	9	3

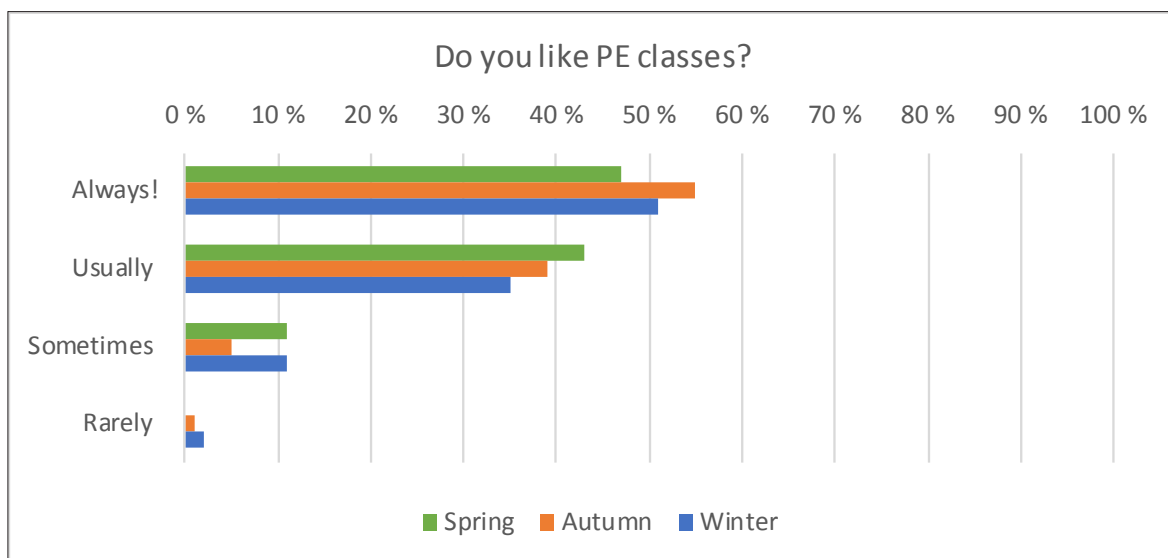


Figure 2. The attitude of the respondents towards the school’s PE classes per survey.

proportion of the children, but in the absence of further information it was not considered a physical activity in this study.

The shares of children using active methods to **travel to school** were close to the national averages. About one third of the children lived up to one kilometre from the school. In the spring survey, approximately 85 percent of these children said they got to school on foot or by bike both in the autumn and spring and in the winter. In the autumn survey, the proportion of those walking or cycling was well over 90 percent. In the winter survey, all of them reported that they usually walked or rode their bike to school. These numbers are close to the national average of 3rd–9th graders (cf. Kallio et al. 2019, p. 98–99). For most, cycling seemed to change to walking in the winter.

The largest share of the respondents, more than a third, lived 1.1–3 kilometres from the school. The spring survey showed a difference in the means of transport between seasons: walking or cycling was favoured by more than 80 percent for the spring and autumn, but for the winter only slightly more than half. In the autumn survey, approximately 75 percent walked or cycled in the spring and autumn, and the again 50 percent or so in the winter. In the winter survey, the share of those who were physically active getting to school was

slightly more than 80 percent for the spring and autumn, but less than half for winter.

By adding the number of those who lived 3.1–5 km from the school, that is, by looking at all of those living less than 5 km from the school, the children in this study are below the national average in terms of being physical activity during school trips. In the spring survey, only about half of the respondents and, in the autumn and winter survey, less than 60 percent of the respondents mentioned that they mainly walk or cycle to school, whereas the national average for the fifth grade is slightly over 80 percent. However, the participants of this study only included a couple of children who lived 3.1–5 km from the school, and only one of them walked or cycled to school.

Favourite after-school **pastimes** and hobbies included being with friends and a wide variety of physical indoor and outdoor activities and forms of screen time. In the spring of the fourth grade, approximately 85 percent of the respondents mentioned some form of sports or outdoor activity among their three favoured pastimes or hobbies. The most commonly mentioned activities included different ball games and various outdoor activities. Cycling and swimming also received a lot of mentions. In the autumn of the fifth grade, approximately 80 percent mentioned

some physical or outdoor activity among their favourite pastimes. In the winter survey, the share was once again approximately 85 percent.

Moving about in nature was explicitly mentioned only on a couple of forms. One answer mentioned “moving about in nature with the dog”, another one talked about “romping around” in the forest, while a third mentioned “hunting” as a favourite pastime. Almost half of the children mentioned something that could be considered to include screen time, such as “gaming”, “phone” or “TV”. The proportion was the same for all the surveys.

Children were asked about the **amount of physical activity during the preceding seven days**. Based on the answers, less than half of the children fulfilled the national minimum recommendation for health enhancing physical activity (Lasten ja nuorten liikunnan asian-tuntijaryhmä 2008), i.e. being physically active for at least an hour on seven days (Figure 3 and Table 8). The children appear to be almost as active as the average eleven-year-old Finn when comparing the results of the study with the results of the national survey that took place from March till May (Kokko et al. 2019, p. 18–19). In the winter survey, the proportion of those who had been physically active for one hour on seven days was only about one third of the children. The small percentage may in part be explained by the season.

In this study, the difference between girls and boys appears to be slightly smaller than the national average (Kokko et al. 2019, p. 18–19). However, the difference points to the same direction: the boys were slightly more highly active physically (Table 8).

There were slight differences between the schools. The children of the Riihivalkama School were most active in all the surveys. In the winter survey, four out of five children from Riihivalkama said they had been physically active for at least an hour on all seven days. The participants from Vuoniitty had relatively fewer participants who had been physically active on seven days but quite a lot of those who had been active on 3–4 or 5–6 days. In the winter survey, all five children who replied

that they had been physically active on fewer than four days were from the Tampere school.

The **amount of physical exercise during a normal week** was approximately the same in the spring and autumn surveys. About half of the children said they were normally physically active for at least seven hours, and less than one third said they were physically active from four to six hours. Only about five percent of the children said that they were physically active for less than two hours during a normal week. In the winter, there was less physical activity: only slightly more than one third of the children said they were physically active for at least seven hours and less than half of the children said they were physically active for four to six hours. The figures correspond to the answers to the question of physical activity during the preceding seven days.

Compared to the national average for the age group, the children of the study were slightly more regularly involved and active in **sports clubs** in the spring and autumn (cf. Kallio et al. 2019, p. 49–50). During those times, approximately 65 percent of the children said they regularly and actively exercise or do sports in a sports club (Table 9). In the winter, the number had decreased to slightly less than 60 percent, and thus corresponded to the national average. Fewer than one in ten did sports every now and then, while nationally the figure is more than one in ten. The share of those belonging to a sports club increased slightly between the surveys conducted in the spring of the fourth grade and autumn of the fifth grade. At the time of the winter survey, the share of those who had stopped being physical active or doing sports as a hobby was over a quarter of the children. On average, the share of children who had never belonged to a club was slightly lower than nationally.

On average, there are no significant differences between Finnish girls and boys when it comes to belonging to a sports club (Blomqvist et al. 2019, p. 49). The children in this study differ from the average in that a significantly larger number of boys were regularly and actively engaged in sports clubs than girls. About three quarters of the boys were

actively engaged in sports clubs, compared to slightly more than half of the girls in the spring and autumn and less than half in the winter. Compared to national averages, the girls of the study engaged in sports clubs less actively and the boys more actively. In the winter survey, a clear majority of those who dropped the hobby were girls; two fifths of the girls said they had belonged to a sports club only in the past.

The material refers to a similar difference between urban and rural children that also exists at the national level. The children of the Riihivalkama School in the countryside were less frequently engaged in a sports club than the city children of the Vuoniitty school, Finnish International School of Tampere and the city centre school of Tammela. (cf. Martin et al. 2019, p. 45). The most actively engaged were the children of Vuoniitty, who lived and went to school in the capital.

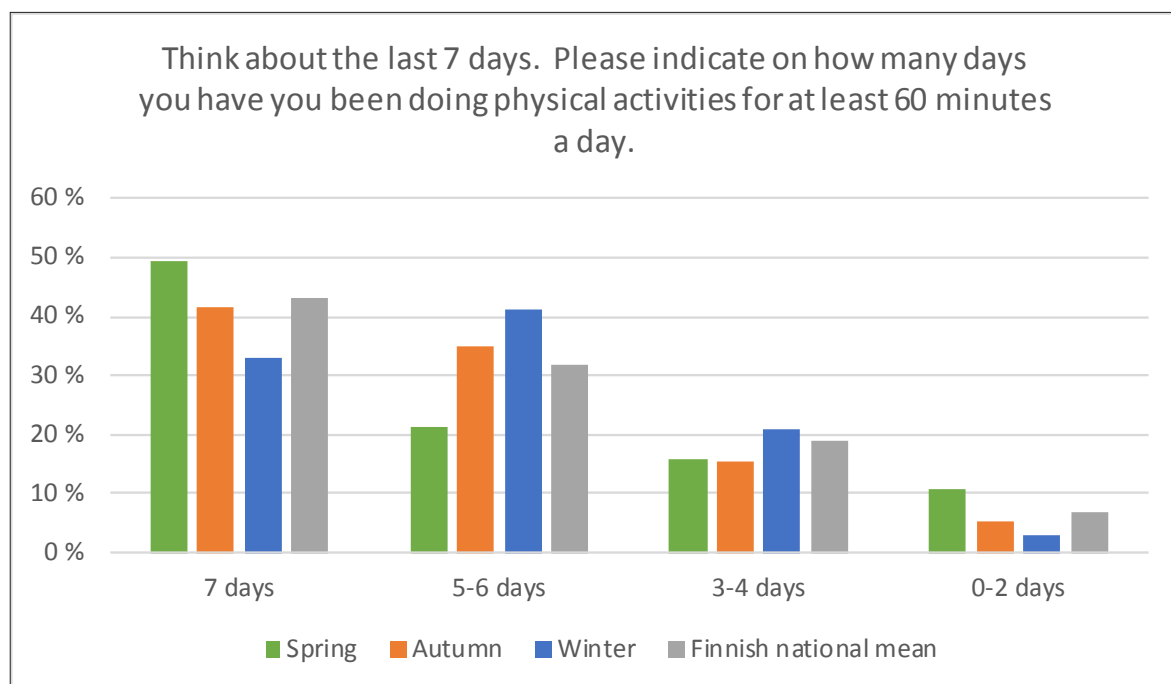


Figure 3. Physical activity of the respondents during the 7 days preceding the surveys, comparison with the result of the national LIITU study (Kokko et al. 2019).

Table 8. Physical activity of the respondents, girls and boys, during the 7 days preceding the surveys.

	4th grade spring			5th grade autumn			5th grade winter		
	Girls	Boys	All	Girls	Boys	All	Girls	Boys	All
7 days	49 %	50 %	49 %	39 %	43 %	42 %	31 %	35 %	33 %
5-6 days	29 %	15 %	21 %	36 %	34 %	35 %	45 %	38 %	41 %
3-4 days	11 %	20 %	16 %	18 %	14 %	16 %	17 %	24 %	21 %
0-2 days	9 %	13 %	11 %	6 %	5 %	5 %	7 %	0 %	3 %

Table 9. Percentages of those engaged in physical activities or sports in a sports club per survey.

Do you belong to and do sports in a sports club?	Spring	Autumn	Winter
Yes I do, regularly and actively.	64	66	57
Yes, every now and then.	7	8	10
I don't at the moment but I have done in the past.	21	13	27
I don't and I have never done.	8	12	3

While more than 40 percent of the children from Riihivalkama were regularly and actively engaged in clubs, the share in other schools was 50–87 percent. At least half of the children from Riihivalkama were not engaged in a sports club when the surveys were conducted, whereas the percentage for Vuoniitty was less than one fifth at the most.

The pupils at Vuoniitty showed a very active engagement in sports clubs particularly in the autumn survey, since only 4 percent of them were not currently active in a sports club. At the time of the survey, less than one third of the children at the Tammela School Centre were not engaged in a sports club. In Tampere, the share of those not active in a sports club at the time of the winter survey was almost the same as in Riihivalkama.

5 Experiences of the Nature Activity Days

This chapter answers to the first two research questions. It first examines the children's experiences of the nature activities of the nature activity days and then considers the other activity elements of the days.

5.1 Physical activities

First of all, the children used the survey form to assess the **moving about in nature during the days in general**. They were asked about the ways of moving about in nature that were either integrated into the nature activity days or that the children could try freely amidst other activities. The list was slightly amended from one survey to another to reflect the possibilities of moving around on the activity day of each season.

All in all, the children felt very positively about their experiences of outdoor activities in nature. After the first nature activity days, all forms of nature activities were given the assessment "Ace!" by at least approximately a quarter of the participants. In the autumn and winter, a slightly smaller number of children gave the highest possible assessment for the nature activities.

Based on the material, roaming around freely was an extremely pleasant nature activity for the children during all of the nature activity days. In all the surveys, approximately 70 percent of the children answered that it had been "ace". Apart from roaming about freely, also swimming and paddling were regarded as particularly fun activities in the spring. The children also liked climbing on



The nature activity days included many different forms of physical activities and means of moving about. At the autumn event, the children rode fatbikes, for instance. Photo: Minna Jokinen / Metsähallitus.

rocks and trees, which was “ace” for more than half of the respondents.

Sitting still in peace and walking along paths were also perceived in mainly positive terms, although slightly less than one fifth of the children did not consider them a fun experience during the nature activity days. Snowshoeing was the least preferred activity assessed here, since about a quarter of children did not like it.

Figures 4, 5 and 6 show the shares of the children’s positive (answers “Ace!” or “Quite fun”) and negative (answers “Not very much fun” or “Not fun!”) assessments in the spring, autumn and winter surveys.

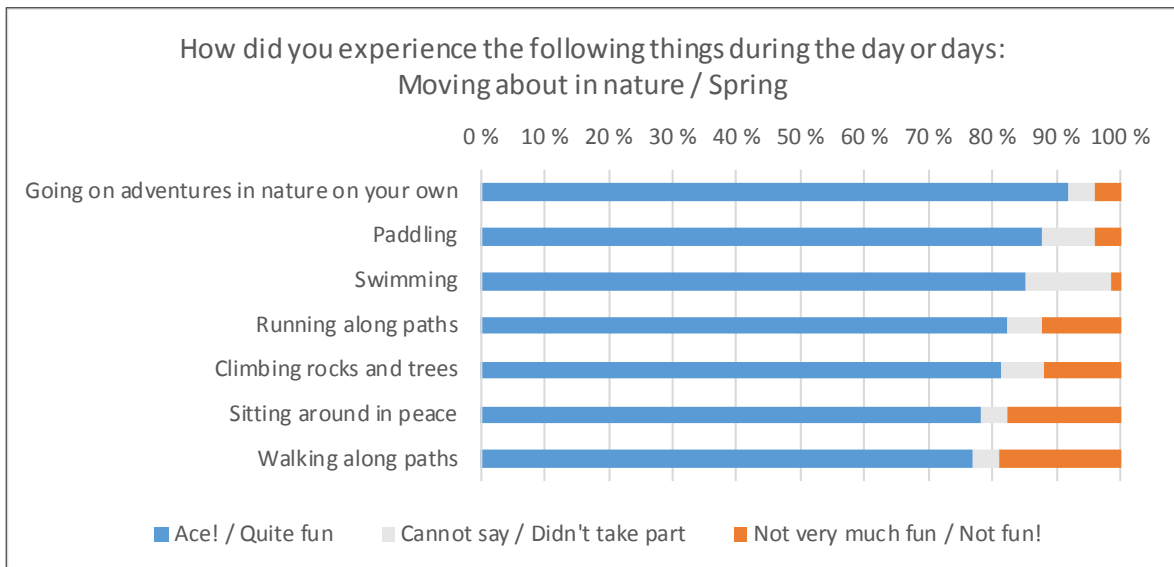


Figure 4. Children’s assessments concerning the nature activities during the spring nature activity day.

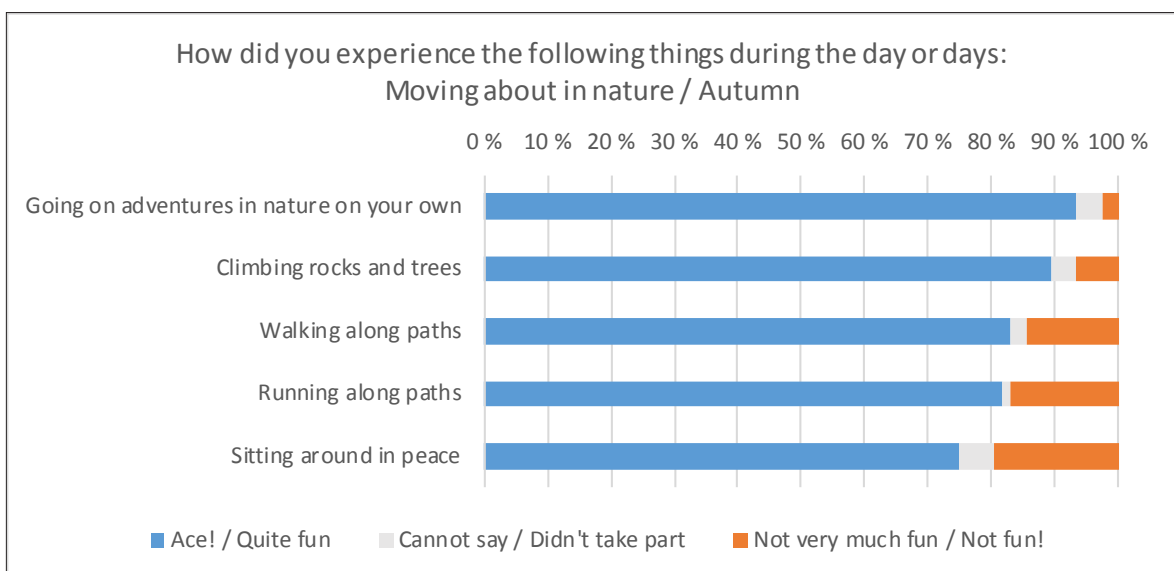


Figure 5. Children’s assessments concerning the nature activities during the autumn nature activity day.

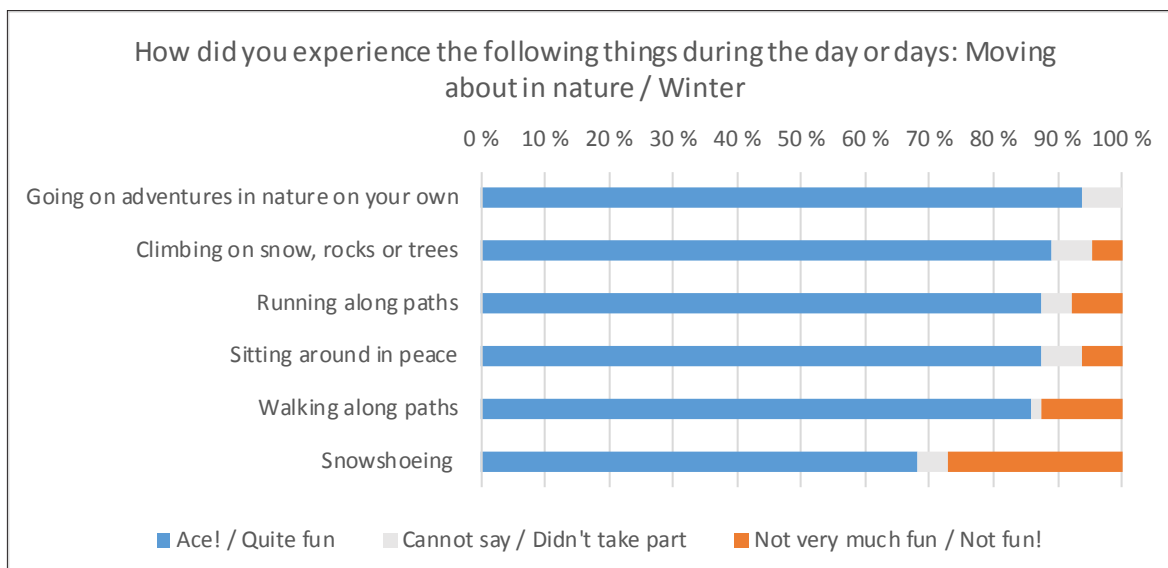


Figure 6. Children’s assessments concerning the nature activities during the winter nature activity day.

Secondly, the children assessed **various forms of activity and elements of physical activity during different activities**. The line between physical activity and other activity elements is partly open to interpretation. For example, “hiking together” is included in the analysis, although it also simultaneously describes the element of being together.

The physical activities assessed during the spring included a hike to a lean-to, learning to paddle, solving the tasks of the Forest Mystery, playing games in the evening, riding a pump trolley and the need for power and stamina during the pump trolley trip. (The pump trolley trip and the evening activities were only part of the programme for the Tampere and Vuoniitty children.) In the autumn, the assessed elements included picture orienteering, searching for checkpoints, SUP boarding and riding a fatbike as part of the Nature Challenge; games at the Korteniemi Heritage Farm; camping together, the speed of walking and length of a hike; juggling together and the need for agility and balancing skills during circus school. In addition, paddling and swimming were part of the autumn’s camping experience. In the winter, the four stages of the snowshoeing trip, the speed and length of the walk and the dragging of sledges were assessed separately. Moreover, the forms of activity included playing capture the flag, sawing, building with

snow and having a dip in cold water or rolling around in snow.

All forms of activity and elements of physical activity were usually assessed as positive experiences. In Figure 7, the assessments for various activity types are presented in the order of most “ace” assessments given by the children. It should be noted that some children also appear to have evaluated activities in which they did not take part. For example, only about a quarter of the respondents had the opportunity to try rolling around in the snow as a replacement for winter swimming, but only 30 percent of the respondents had chosen the Cannot say category.

The pump trolley trip and building with snow were extremely fun activities for about 80 percent of the children. Of those who took part in the pump trolley trip, no one gave a negative assessment of the need for power and stamina in operating the trolley. A slightly more common activity, playing different types of games, was also usually considered extremely fun. A very large part of the children who tried the SUP board and the canoe assessed them as very nice experiences as well.

Hiking in the autumn and snowshoeing in the winter emerge as activities, which were top experiences for fewer children. The length of the hike was the most negatively assessed element in the children’s three surveys; nearly one third of the children did not consider it

fun. Approximately one quarter of the children were not pleased with the legs of the snow-

shoeing trip. About one fifth of the children did not like the speed of hiking and snowshoeing.

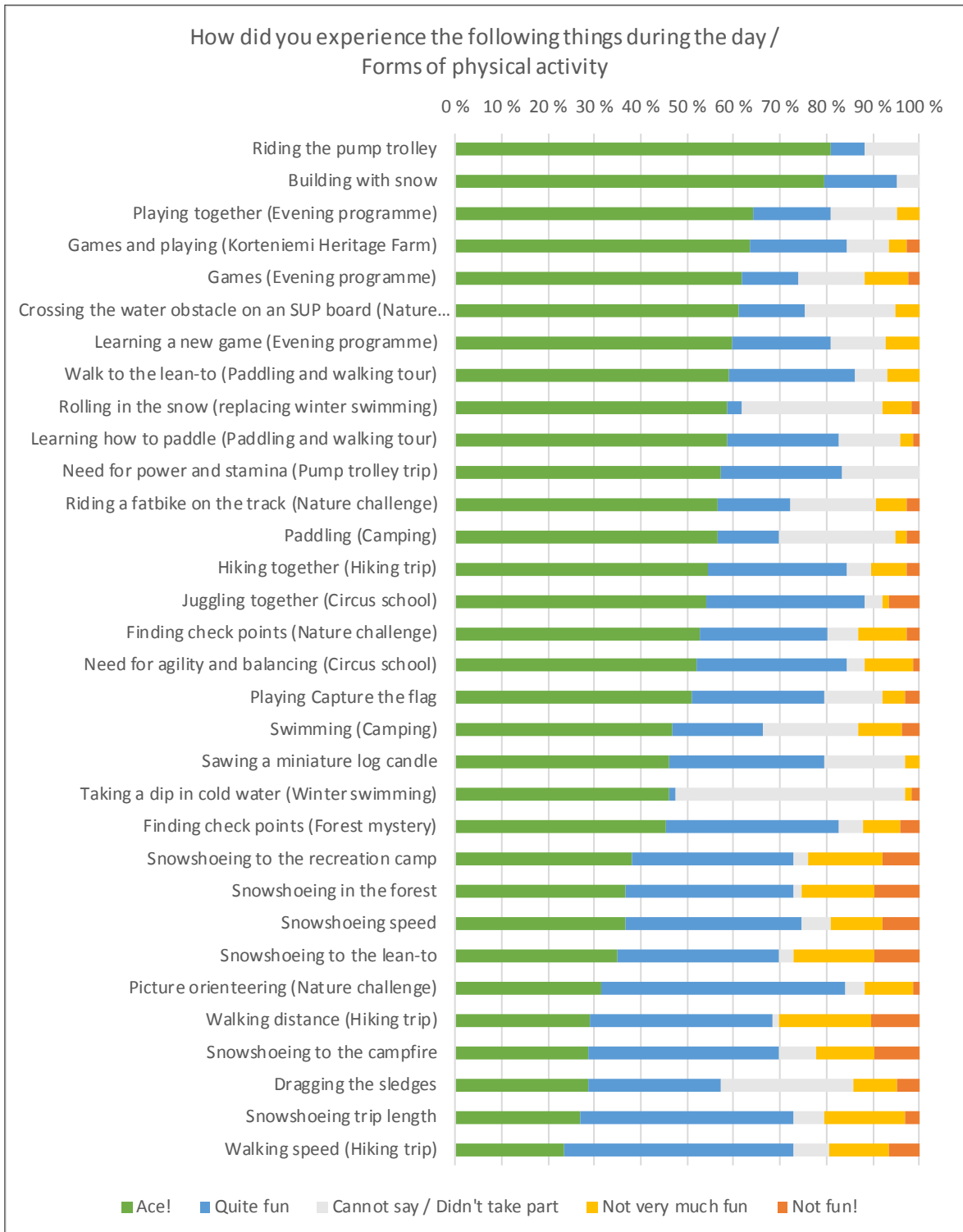


Figure 7. The children's assessments of different forms of activity and elements of physical activity during the nature activity days (the activity to which the form activity was related in parentheses).

Thirdly, in the interviews the children told in their own words about **how they had felt about moving about in nature**. The large number of different types of physical activity seems to have been an important factor in the children having had a fun experience. The different forms of activity, on the other hand, were considered particularly attractive due to novelty, freedom and challenge.

Children liked to try out new types of activity and to learn new things. This is exemplified by an interviewee's answer to the question what was fun about walking in snowshoes: *"Because it was a new experience for me"*. The freedom to move around can be summarised as having meant freedom in terms of the form, place and objective of physical activity. It could mean advancing along a self-defined route at one's own pace when being allowed *"to go as you please"* in snowshoes. It could also be an opportunity for independence and creativity when building with snow. One of the interviewees said that building with snow was nice because *"you were free to build what you like, there were no obstacles"*. To the interviewee *"freely"* meant *"that you can be yourself"*.

The challenge of a physical activity was particularly related to experimenting with new forms of activity. It required movement in ways that were not previously known, but which provided experiences of learning and capability once done. Children exceeded themselves by moving in a new environment in new ways, which has been connected to the strengthening of the experience of competence (see Paukkeri 2014, p. 29–30, Telama 1992). *"I think that everyone was, when we did that new thing, which was almost like a challenge, then you just tried harder"*, said one of the interviewees. In winter swimming, the challenge was particularly clearly both physical and psychological, which resulted in experiences of survival and capability. For example, a boy who had a dip in the ice hole said that after the activity *"I felt really happy and good that I did it"*. A reasonable challenge also meant an appropriate balance between physical activity and rest, for instance a meal break.

Based on the interviews, new and challenging things and pushing on with a friend explain the attractiveness of operating the



During the winter nature activity day, one activity that was particularly liked was building with snow. This activity was carried out in the vicinity of the Caissaniemi Recreation Camp. Photo: Lassi Puhtimäki.

pump trolley and paddling, for instance. Hiking, on the other hand, lacked a novelty value. The interviewees thought that walking was perceived as both too normal and tiring. For those who walked little in their everyday lives, the long journey caused foot pain. Working with the equipment may have put a damper on the snowshoeing experience. In the following quotation, a child compares hiking and riding the pump trolley:

Walking isn't like a new thing, and then it's not really, when you just walked on and looked at the shoes of the person walking in front of you and your feet to see where you're stepping. Like it didn't have any action that you could participate in. - - - The walking was okay, but I would prefer to do something else. That pump trolley thing was really nice, for example, since I hadn't done it before. - - - And it was really warm and it was really pretty. And you had good friends with you.

In the interviews, children linked their experiences of forms of movement with elements other than those of physical activity. The previous quotation already shows elements such as aesthetics and togetherness. Physical activity was particularly nice when it included also other things that were important to the child.

5.2 Other activity elements

Other activity elements assessed by the children included guidance, competition, thrills, having fun, working together, breaks and meals, learning skills and various tasks and chores. The assessments thus concerned operating methods, feelings, results of the activities and also forms of activity.

The assessments have been read acknowledging that some of the negative assessments may have meant the absence of an element. Based on the interviews, this particularly concerns the assessments of thrills and competition.

Children's preferences are first examined as parts of the activities. This allows us to compare the elements with each other. The



The Forest Mystery included searching for check-points and solving tasks. Photo: Johanna Ahtiainen / Metsähallitus.

next step concerns examining the assessments as a whole and interpreting the significance of the elements in the children's experiences. Figures 8–23 show the proportions of positive and negative assessments, and the text will discuss the very positive experiences, in particular. In order to present an overall image, the assessments of the forms of movement discussed in chapter 5.1 are also included.

In the spring, the **Forest Mystery** had the children searching for treasure in groups based on tips. The children most often gave the assessment "Ace!" to working as a group (52%), thrills (47%) and finding check points (45%). The competition aspect divided the opinions of the children. While more than 40 percent felt it was "Ace!", almost a quarter considered it a negative part of the activity. The instructions also received a relatively large number of negative assessments in this activity, as in several other activities.

The paddling and walking tour included a variety of activities, and the excursion was

carried out in two groups which swapped activities after a break during which the children had a packed lunch. The children were most likely to assess the following activities as “ace”: spending time freely in nature (68%), walk to the lean-to (59%) and learning to paddle (59%). Spending time freely was assessed to be the most positive experience – even though the main attractions on the excursion were canoeing and hiking. Eating a packed lunch was assessed as the second

best element. The lunch break on this excursion included making hot chocolate on a camp cooker, and three participants mentioned this as something particularly nice under the “Other, please specify” option on their own initiative. All the elements of the activities mentioned in the form were assessed as very positive. Instructions and guidance received the highest number of negative assessments, but these were given by only about one tenth of the children.

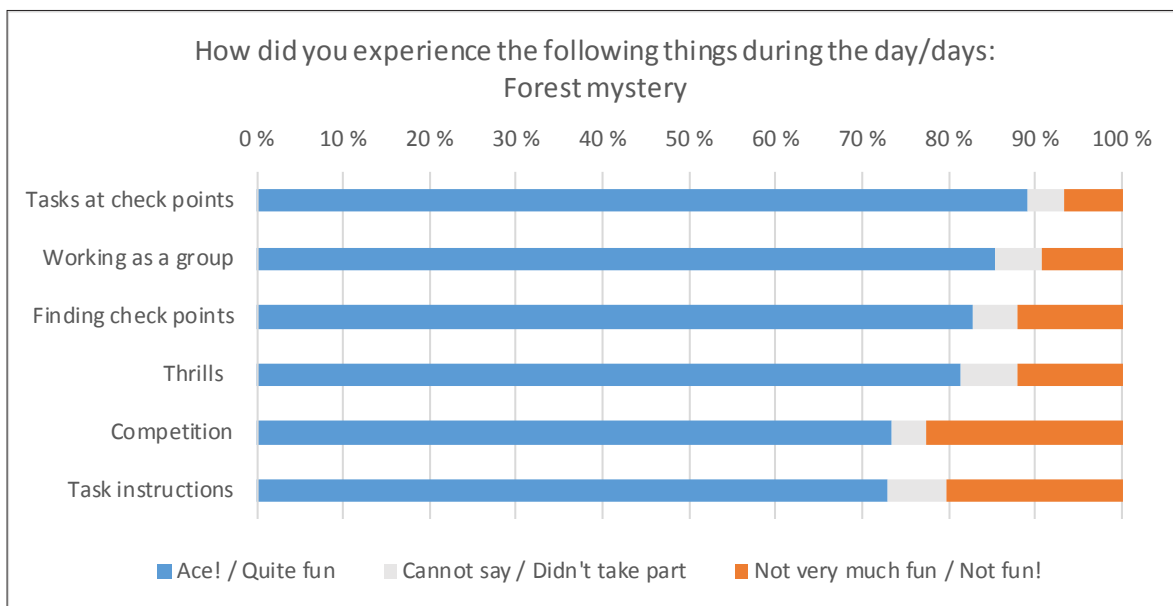


Figure 8. Children’s assessments of the elements of the Forest Mystery.

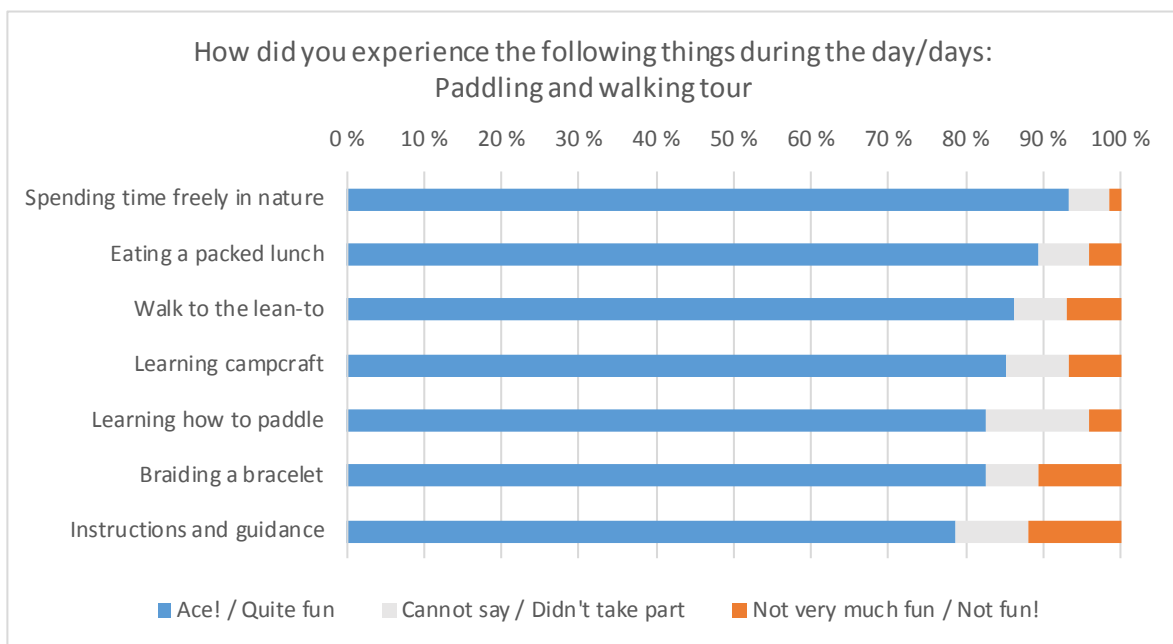


Figure 9. Children’s assessments of the elements of the paddling and walking tour.

The evening activities for the classes of the Vuoniitty school and the Finnish International School of Tampere included traditional games. Of the things asked about in the survey, 83 percent thought having fun was “ace”; in other words, playing traditional games was thought to be a very fun activity (Figure 10). This was the element of the spring activities that received the highest number of “ace” assessments, and the other elements of playing were considered nice as well. In this activity too, competition was something that some children liked a lot (for 40 percent it was “ace”), while a significant part did not like it.

Only the classes of the Vuoniitty school and the Finnish International School of Tampere participated in the **pump trolley trip** on the Jokioinen museum railway. In the survey, the different elements of the excursion received very positive assessments from the children (Figure 11). In addition to physical activities, the speed was considered a very positive experience. Thrills and cooperation were other elements often assessed as “ace”. Only instructions and guidance received negative assessments from the children.

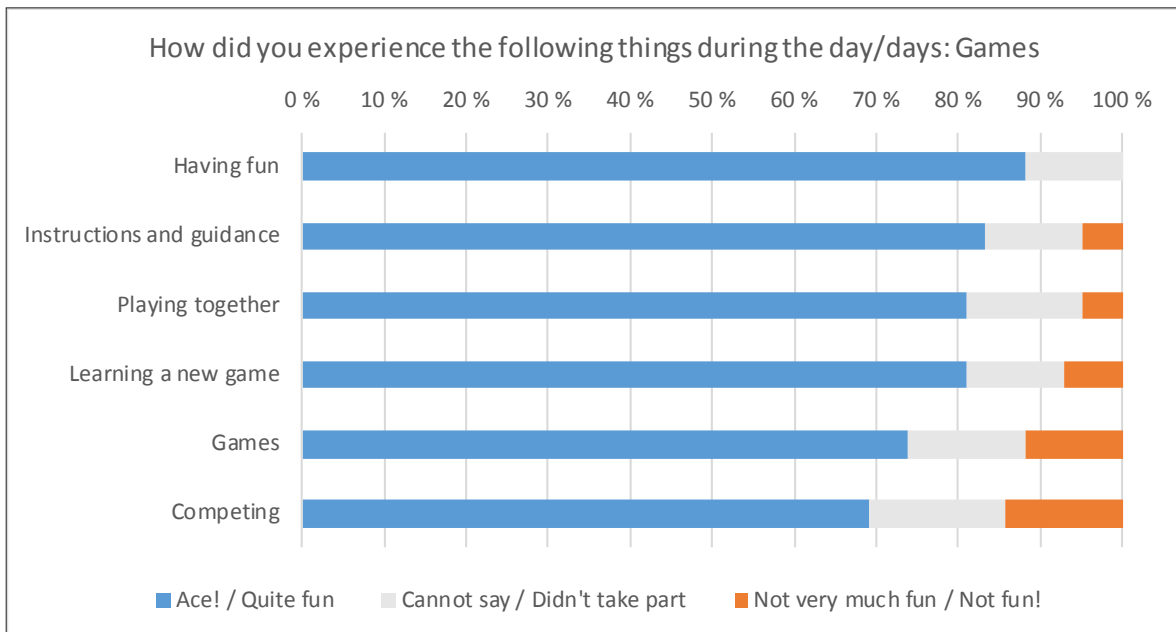


Figure 10. Children’s assessments of the elements of the games.

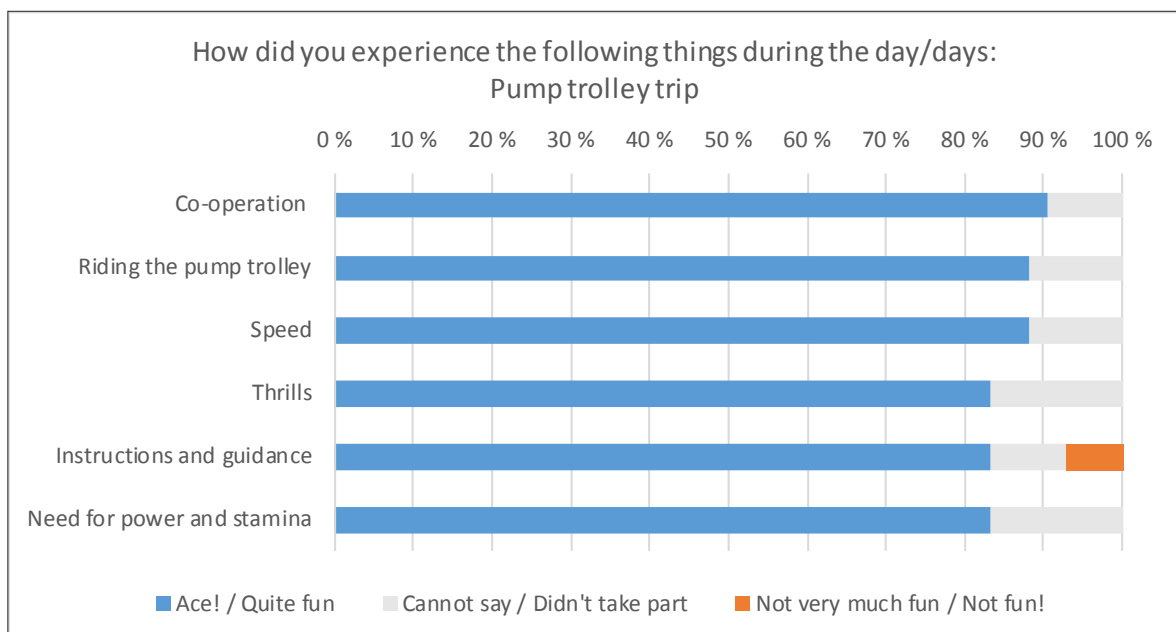


Figure 11. Children’s assessments of the elements of the pump trolley excursion.

Based on the survey, getting to know the animals was the best part of visiting the **Korteniemi Heritage Farm** in the autumn (Figure 12). Approximately 70 percent of the children assessed that having fun was also “ace”. More than half of the children also said that working together, learning new things about farm life and getting to know the buildings and work on the farm were “ace”. Based on the material, activities at the Heritage Farm were all in all very positive experiences for the children. Over 80 percent of the children assessed all the elements of the activities as at least quite fun.

Due to the weather, most of the school children from Tampere and Vuoniitty taking part in the **Nature Challenge track** were unable to try the SUP board, fatbike and making fire. These three activities were very positive experiences for the participants who were able to participate in them (Figure 13). Orienteering with a partner using pictures, maps and a GPS device seems to have been enjoyable for the children. Some of the orienteering tasks at the checkpoints, on the other

hand, were considered less enjoyable. Approximately one fifth of the children did not like the identification of plants, looking for rock painting stones and the task related to everyman’s rights. Nearly one fifth of the children also did not like the competitiveness that they felt was part of the activities.

The element the children enjoyed the most about the **hiking trip** was eating a packed lunch (Figure 14). More than half of the children thought eating the packed lunch was “ace”. The excursion stands out from the rest of the activities of the nature activity days, as the excursion appears to have had only some elements that the children liked particularly much. On the other hand, the majority of the children thought that the elements asked about on the form were quite nice. For example, learning new things about nature was quite fun for just under half of the children. More than a quarter of the children were not pleased with the length of the hiking trip (5 km), instructions and attractiveness of the route.

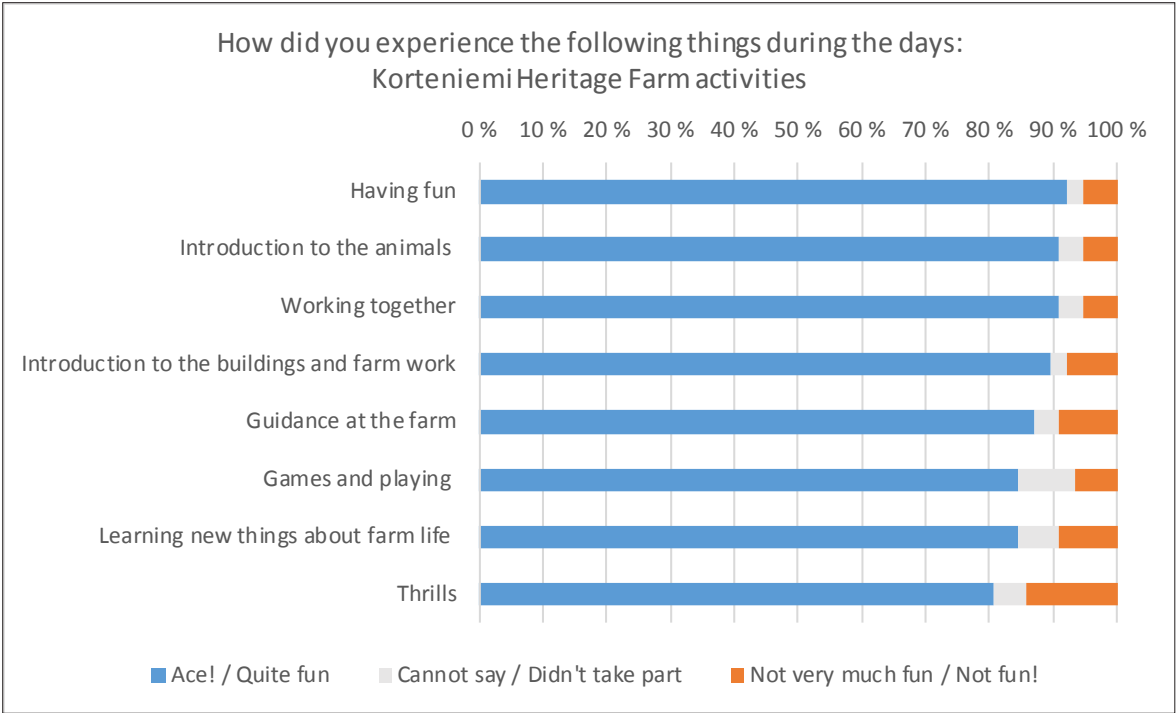


Figure 12. Children’s assessments of the elements of the Heritage Farm activities.

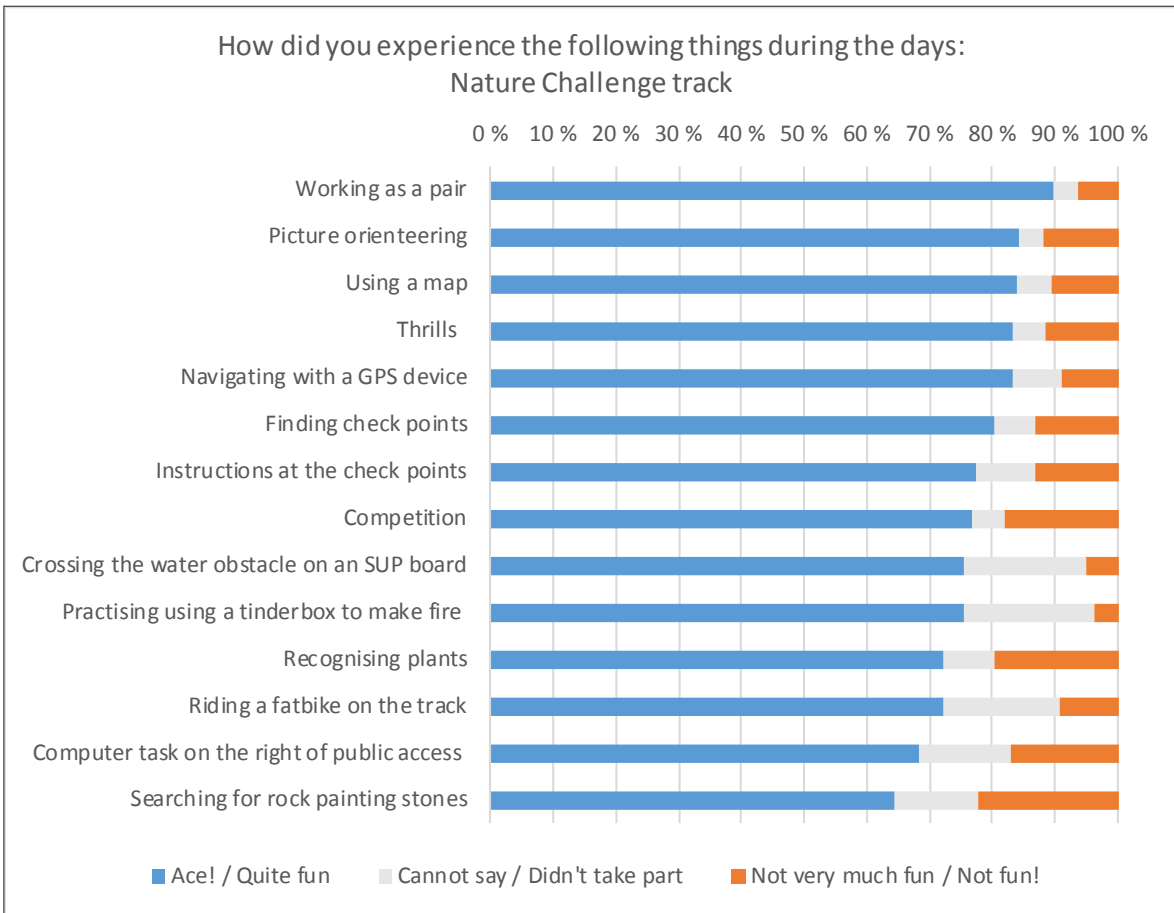


Figure 13. Children’s assessments of the elements of the Nature Challenge track.

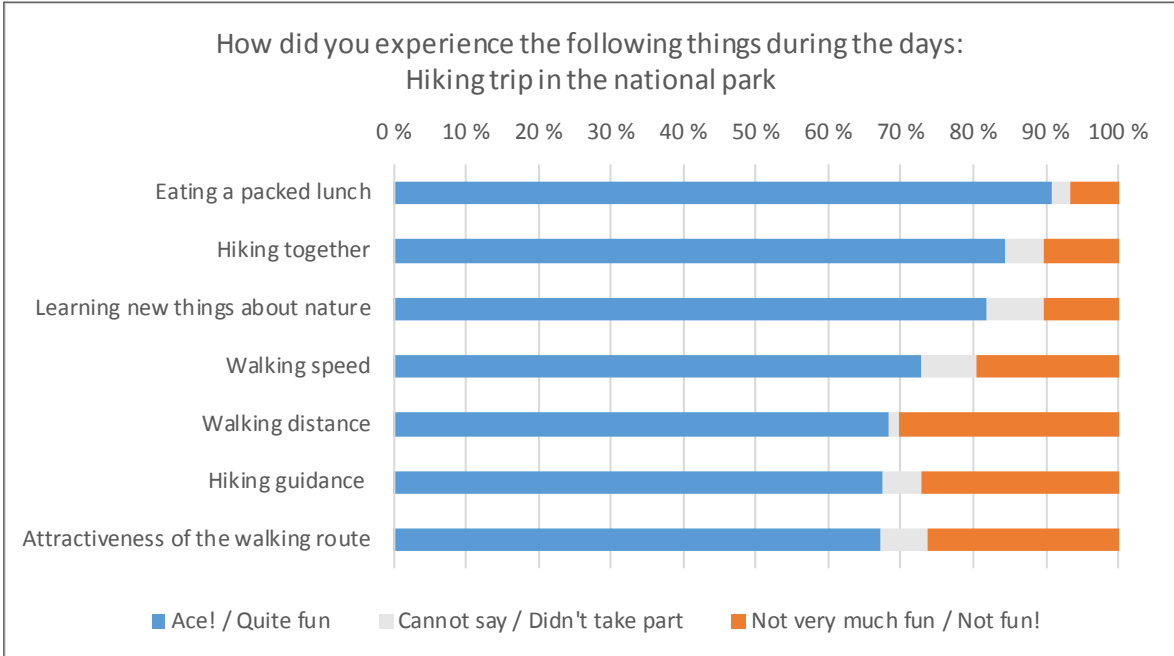


Figure 14. Children’s assessments of the elements of the hiking trip.

The children liked the activities of the **circus school**. Having fun and the equipment were considered “ace” by the children (Figure 15). The circus school instructor stressed that the activities were not a competition. Nevertheless, three quarters of the children responded that they had liked the competition – on the other hand, competition was also the element that was most often considered negative.

Getting to know the **ponies** was a fun and even exciting experience for most of the children (Figure 16). Of the elements asked, having fun was “ace” for nearly two thirds and thrills was “ace” for nearly half of the children. Over half of the children thought working together, taking care of the ponies and learning new things related to animals was highly enjoyable. However, nearly one fifth of the children, a fairly large number, did not enjoy the calmness during the pony visit, taking care of the pony or the thrills.

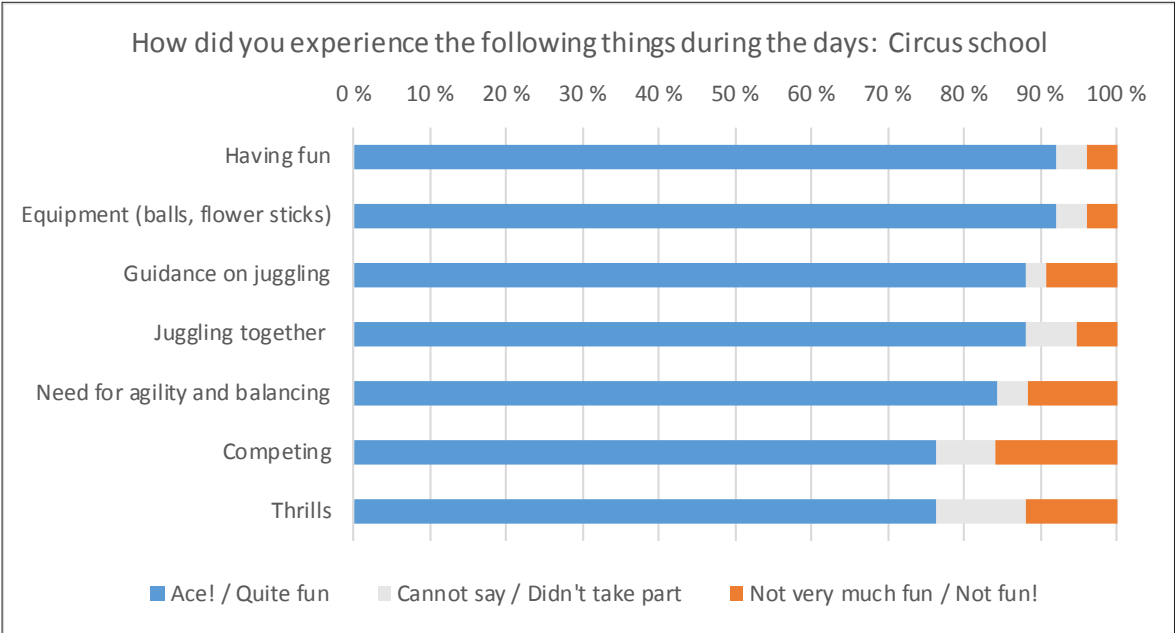


Figure 15. Children’s assessments of the elements of the circus school.

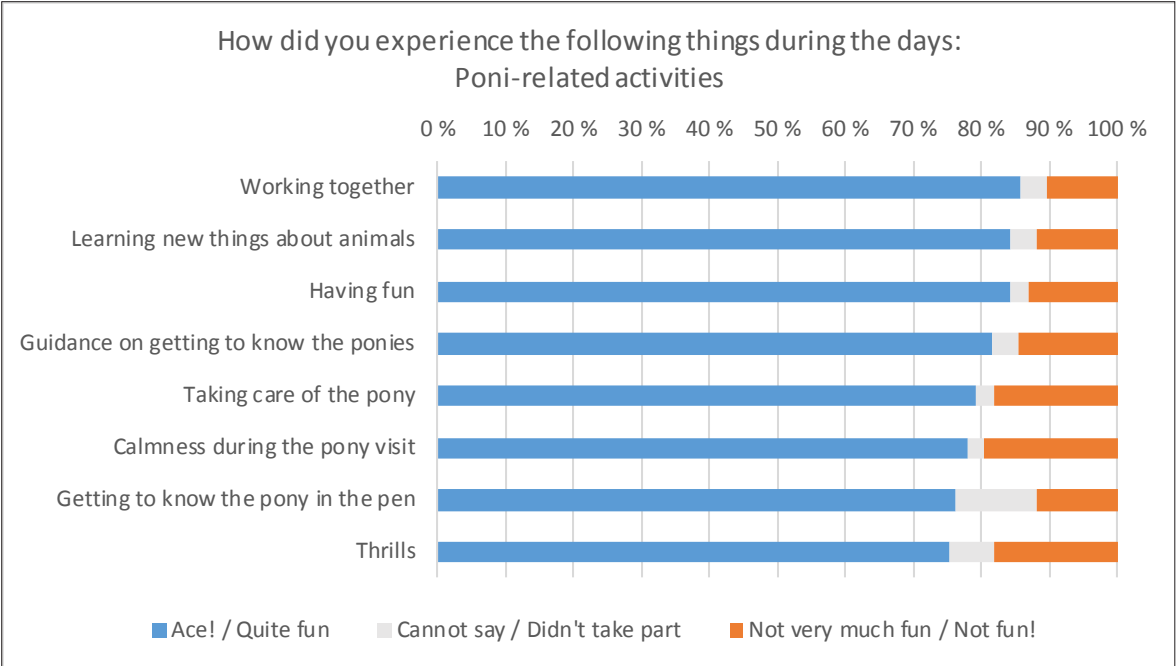


Figure 16. Children’s assessments of the elements of the pony-related activities.

Camping included dinner, setting up camp, evening programme, breakfast and dismantling the camp. Based on the survey responses, there were many elements that most children considered to be very nice. Having fun, eating by the campfire, cooking on an open fire, spending the night in a tent, having a sauna,

working together, learning new things about camping and pitching and dismantling a tent were “Ace!” for more than 50 percent of the children (Figure 17). On the other hand, spending the night in a tent was the element that received the highest number of negative assessments; nearly one in ten children assessed it as “Not fun!”.

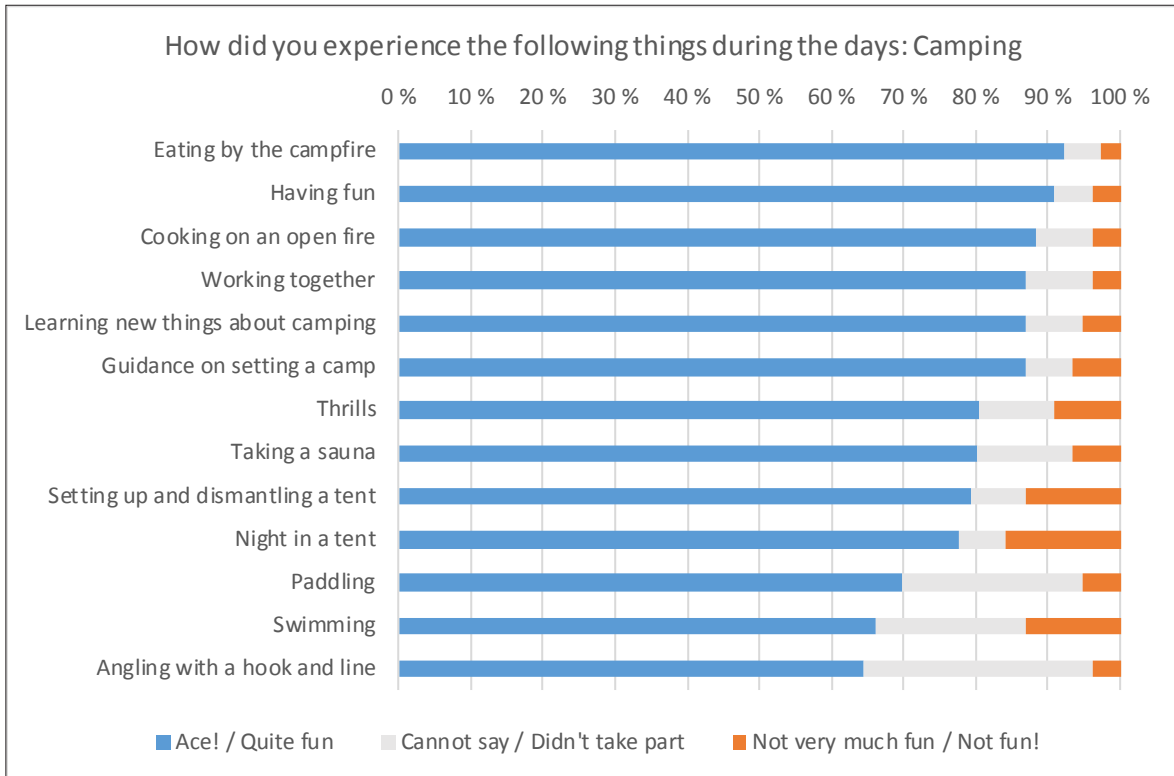


Figure 17. Children’s assessments of the elements of camping.



Camping included the setting up and dismantling of tents. Photo: Päivi Pälvimäki / Metsähallitus.

As regards the **snowshoeing** activity during the winter's nature activity day, the actual walking in snowshoes was assessed more negatively than meal breaks, learning, having fun, working together and thrills (Figure 18). Having fun was “ace” for nearly a quarter, and two thirds thought that having a packed lunch or a snack during a break and working together were “ace”. Learning new things was also “ace” for most of the children.

Some of the children **dragged sledges** while snowshoeing. Again, the actual physical activity was thought of in less positive terms

than the other elements (Figure 19). However, it is also important to note the proportion of answers belonging to the “Cannot say” category. They show that some children did not drag the sledges themselves. Learning new things, having fun and working together were considered things that were the most fun. Having fun was “ace” for most children. About half of the children also thought that learning new things and working together were the elements they enjoyed the most about this activity.

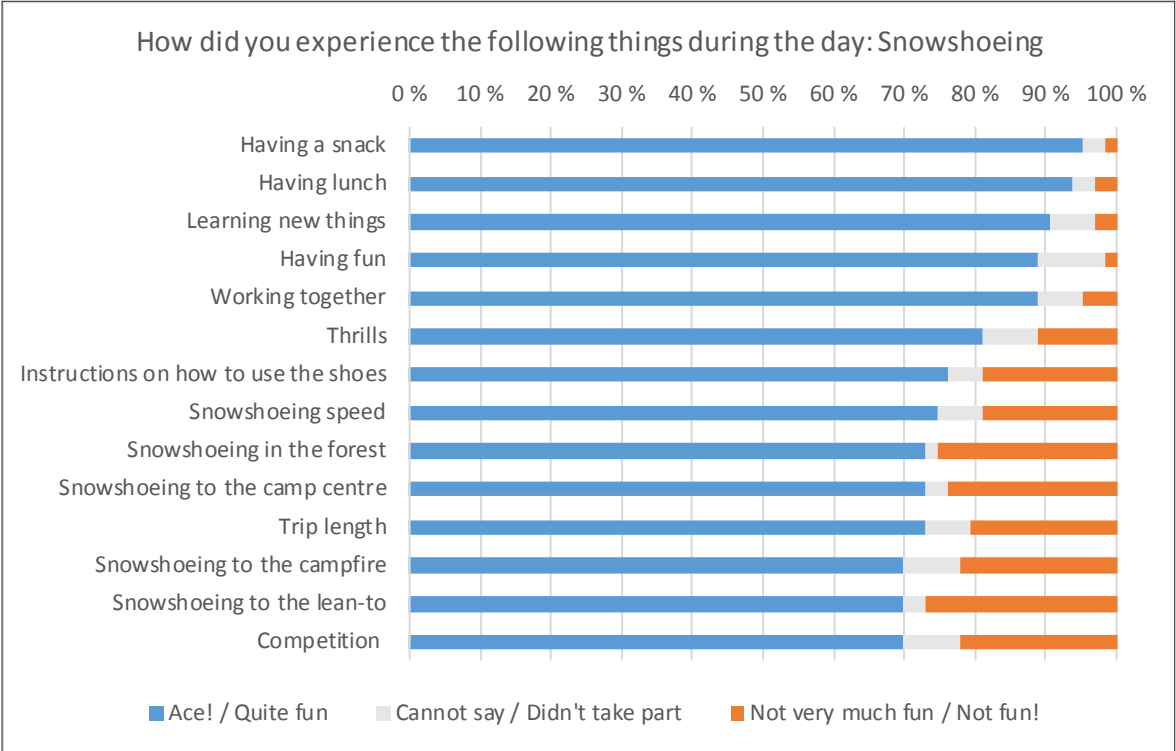


Figure 18. Children's assessments of the elements of snowshoeing.

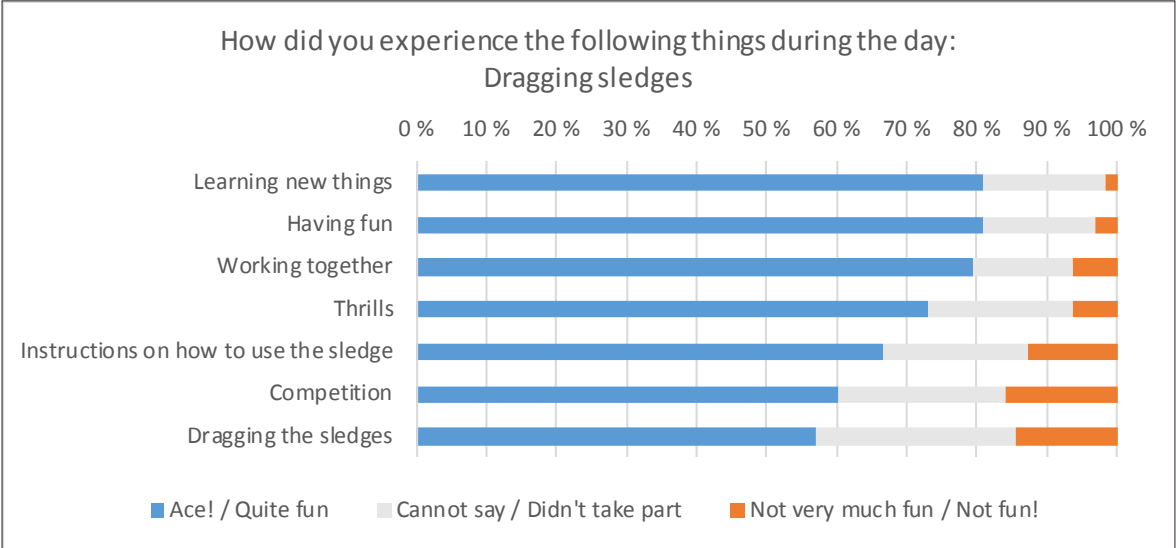


Figure 19. Children's assessments of the elements of dragging sledges.

In **capture the flag**, having fun, working together and learning new things were fun for most children (Figure 20). These were also “ace” for more than half of the children. As in the previous activities, the game itself was not rated as high as the three elements mentioned. The competition was fun for three quarters, but one in ten assessed it negatively.

In making a **miniature log candle**, the sawing itself was the most common positive element (Figure 21). The experiences of learning and working together were again positive for most people. Working together was assessed “ace” by almost 60 percent and having fun by approximately 50 percent of the children. It can be assumed that the competition element was missing from this activity, which is what one of the respondents also wrote on the form.

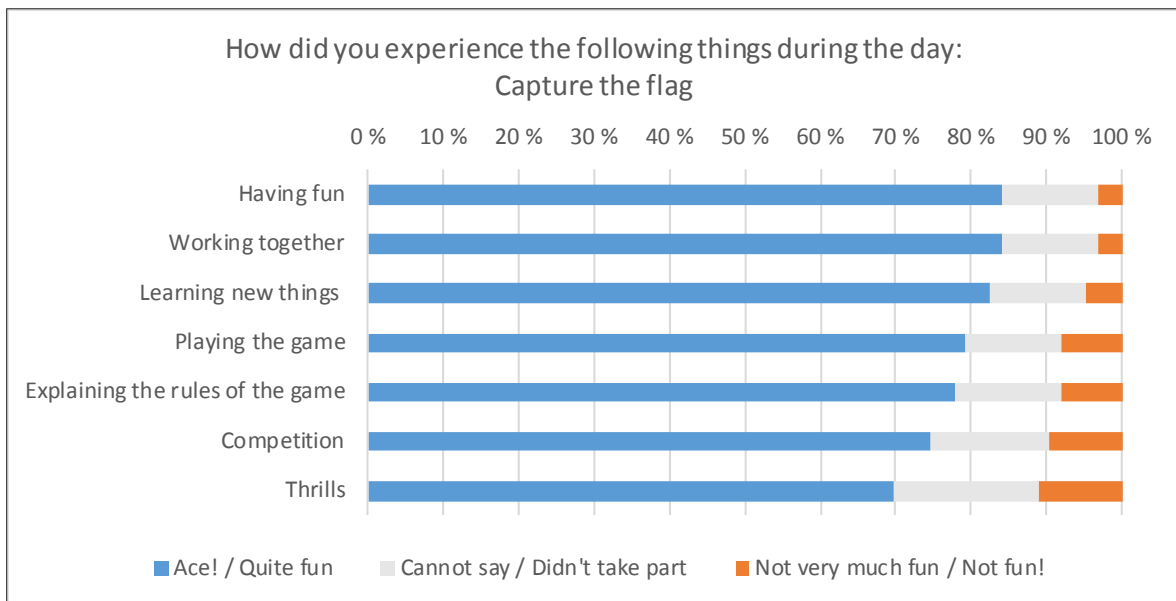


Figure 20. Children’s assessments of the elements of capture the flag.

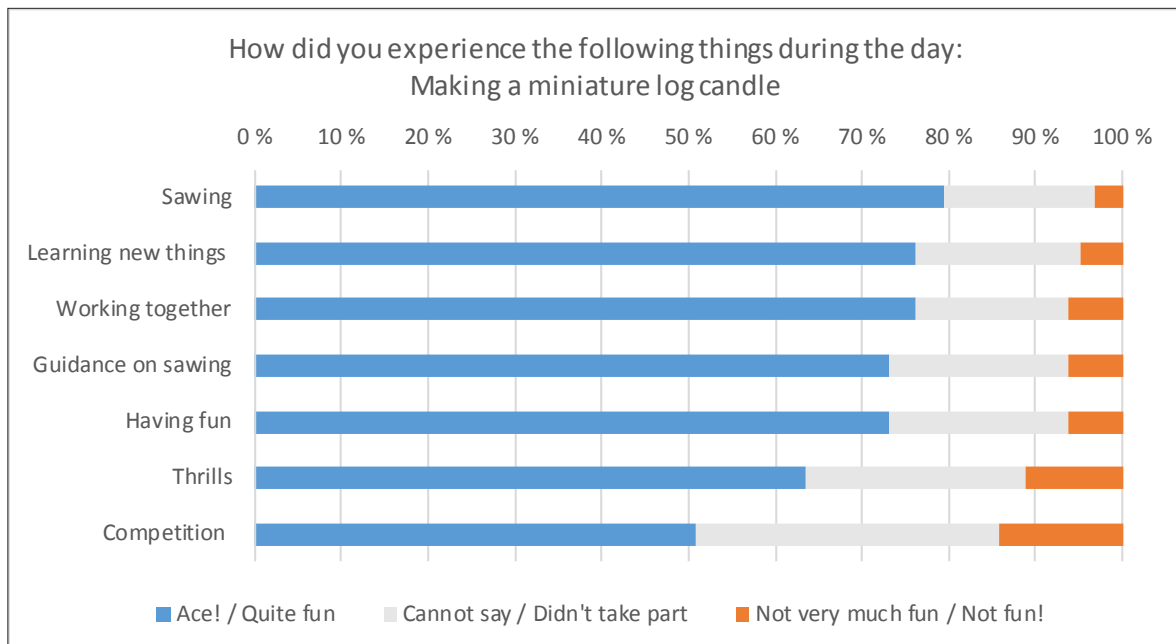


Figure 21. Children’s assessments of the elements of making miniature log candles.

Building with snow was one of the most popular activities at the nature activity days. All the elements asked were “ace” for at least every other respondent (Figure 22). Having fun was greatly enjoyed by over 80 percent of the children and working together by more than 75 percent. Learning new things, on the other hand, was greatly enjoyed by more than 60 percent.

For approximately two thirds, the ace activities of **winter swimming** were having fun, having dinner and working together (Figure 23). Learning new things was “ace” for almost 60 percent. Only some of the children went to the sauna, had a dip in the water or rolled around in the snow, which is reflected in the relatively large proportion of Cannot say answers. On the other hand, it can be seen that children sometimes expressed their opinion about an activity in which they did not participate.

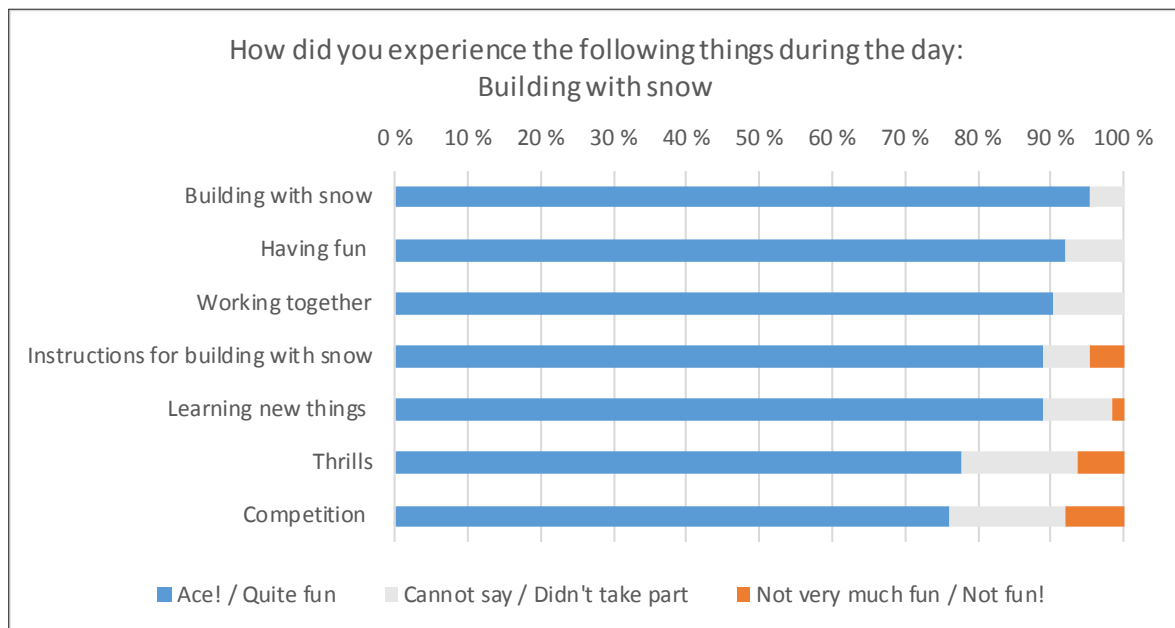


Figure 22. Children’s assessments of the elements of building with snow.

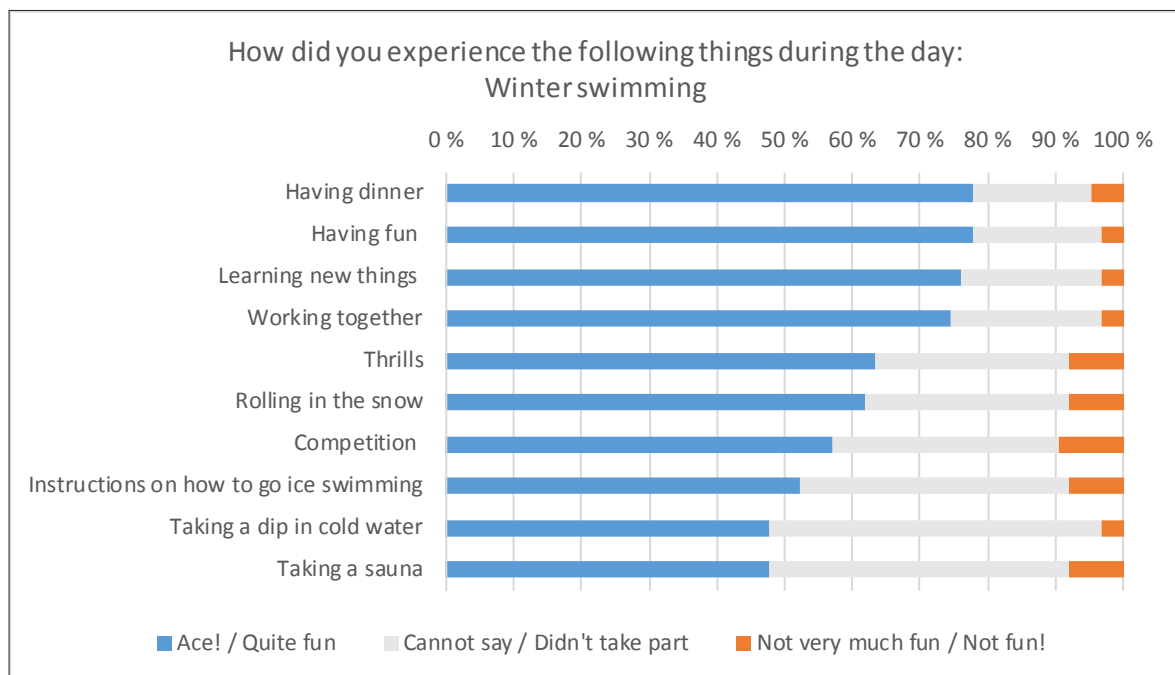


Figure 23. Children’s assessments of the elements of winter swimming.

5.3 On the central elements

The activities were particularly nice or otherwise meaningful when they included several important things for the child. Variedness, novelty, freedom and challenge were some of the things that were appreciated in physical activities. Learning new things, having fun, working together and various meal breaks were included in the other elements enjoyed by most of the children. Competition and thrills as well as guidance did not turn out to be highly enjoyable elements in the activities.

Two other important elements that emerged during the interviews were aesthetic nature experiences and the freshness of outdoor air. For example, beautiful landscapes were considered charming during the pump trolley trip, and spending time in the fresh air was connected to the experience of not getting tired. *“There was a lot of fresh air when we were constantly outdoors, it felt like you had like more energy to do stuff.”* Also meal breaks and tasty meals were nice things mentioned by many of the interviewees. This is described

in the following excerpts from two different interviews.

EH: *What was nice [on the winter nature activity day]?*

Interviewee: *Well, everything. Especially the food was really good. And sauna and stuff.*

EH: *What was it like for you [on the activity days]?*

Interviewee: *It was exciting. I liked when we sat next to the fire and ate our food also. I liked when we did the pancakes.*

The following describes the children’s experiences of the four elements in detail. Based on both the interviews and the surveys, working together, learning new things, freedom and competition engendered essential experiences for the children during the nature activity days.

The experience of **working together** was formed through activities with the entire class and with individuals such as best friends. In



Spending meal breaks with friends was important to the fifth graders. At the campfire site of the Folk Park of Saari, the wintry lunch included hamburgers. Photo: Lassi Puhtimäki.

the survey following the winter event, the children were asked to assess their class spirit and activities with other participants during the nature activity day. Working with their best classmates was considered “ace” by 90 percent (Figure 24). None of the respondents considered it a negative experience. Working with the entire class was more often quite fun than ace. However, almost everyone felt positively about working with the class. Likewise, class spirit was usually assessed as quite fun or “ace”, and only one tenth of the children assessed their class spirit as “not very much fun”.

On the basis of this question, there were some differences between the classes regarding the experience of being together. The children from Riihivalkama enjoyed being and working together a lot more than the other respondents. Each of the Riihivalkama children assessed that each element was at least “quite fun”. For example, all the children from Riihivalkama considered working with the entire class “ace”, while in other classes it was considered “ace” only by every other child at the most.

The children interviewed came from the schools of Riihivalkama and Tampere. The pupils in these classes had answered the questions about being together during the nature activity day more positively than the pupils in the other two classes. During the interviews, they also talked about being together with the

class during the day in a very positive tone. In many activities, a particularly nice element was working together with friends; this was mentioned in connection with activities such as the pump trolley trip, building with snow, having a sauna and paddling.

The class comprised friends and acquaintances who were nice to work with: “*We know how to cooperate well. And anyway, everyone likes one another and then because of that it’s easy to do everything together.*”. A few interviewees pointed out that it was possible to work together with the classmates without having to fear that someone would say or think bad things about them. The element of being together also included building a closer relationship with one’s friends. Classmates could get to know each other better when they were outside the normal school environment and worked together in novel ways for days at a time. In addition, a few children made a connection between enjoying being together and the relaxed nature of the activities: “*My classmates were like nicer then because they didn’t need to study and got to do fun stuff.*”

Learning new things was often mentioned by the interviewees. It can therefore be expected to have been meaningful to the children themselves. Talking about learning was most often related to trying out and learning new forms of activity. The children also mentioned that they had learned about fire making, using the compass and the

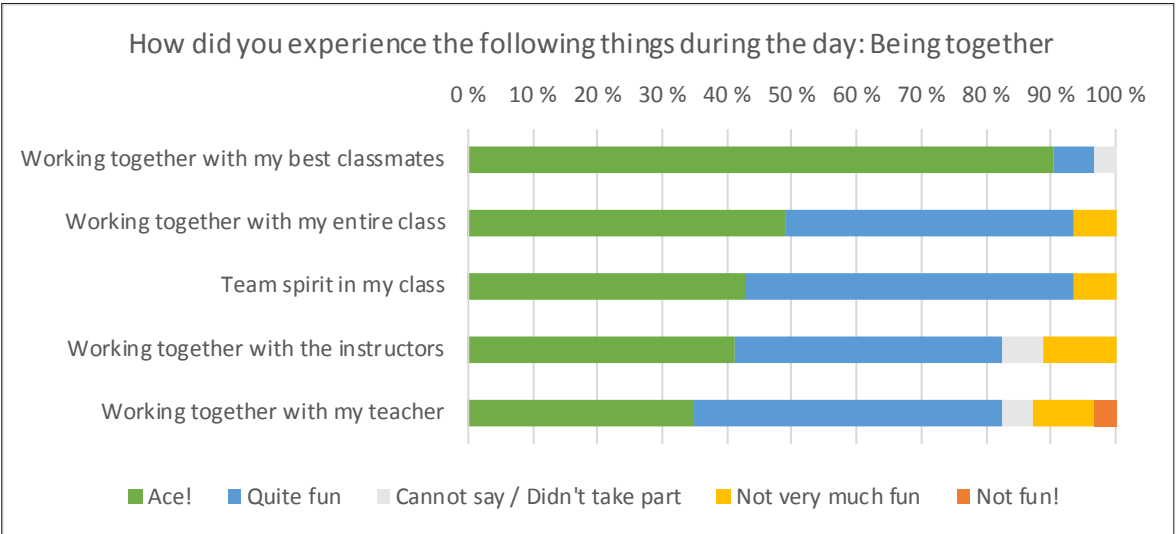


Figure 24. Children’s estimates of being together during the day.



During the nature activity days, children worked together and learnt new things, for example at the Heritage Farm of Korteniemi. Photo: Minna Jokinen / Metsähallitus.

benefits that moving about outdoors has for one's energy levels. In addition, they had received information on animals and plants. The importance of the experience of learning is well exemplified in the answer of one of the interviewees to the question of what they had thought about the nature activity days: *"I thought it was really nice to try what the camp or what do you call it was like. And we learned a lot, about new things. - - - For example, a lot about animals, and plants, like what you can eat and what you can't."*

Experiences of **moving around freely** were one of the most important issues for children during nature activity days. The children enjoyed the opportunity to determine the manner and objective of their physical activities, and the experience of freedom appeared to be important also in how time was spent overall. On the survey form, many children expressed a wish to have more

free time during the next event or told that they had especially enjoyed their free time. The following quotation from an interview describes the experience of one of the interviewees with regard to the importance of free time during the nature activity days:

I haven't usually visited those kinds of places. I mean I haven't been in nature a lot. I've usually only gone to practice and it's been the only place where I'm actually, like I can be free, do what I want. Or not whatever I want, like, you've got to listen but you can also have fun.

Based on the interviews, this emphasis on freedom also partly explains why instructions and guidance were assessed so negatively fairly often. Instead of listening while being still, the children wanted to be able to try things and move about freely.

The **competition** element divided the children in the survey responses. Some of the children considered competition a very nice thing, but on the other hand it also received a lot of negative assessments. During the interviews, the children thought that the answers may also partly mean that the activity was not considered to include any competitiveness. However, competitiveness in general was also considered an unpleasant part of physical activities. Some children thought that many people are not competitive. *“Since I’m not really good at competing, so that’s why I don’t think it’s a lot of fun”*, said one of the interviewees. Another interviewee pointed out that there are already many competitions at school and they usually cause friction. A third interviewee

indicated that they preferred cooperation: *“I don’t like competing. It’s just like everybody is against each other and stuff. If everybody just came into the same group, everybody would get the prize, but they’re like ‘now let’s fight each other over it’”*.

The observation made on competitiveness being a negative part of the activities is supported by the results of a national study on the physical activity of children and youths (Hakanen et al. 2019, Koski & Hirvensalo 2019). According to the results, on average, competing is no longer one of the most important meanings of physical activity. In addition, too much competitiveness prevents participation in physical activities.

6 Relationship with Outdoor Activities in Nature

This chapter discusses the relationship children have with outdoor activity in nature and its possible changes over the period under investigation. First, the attitudes towards outdoor activity in nature are examined through the experienced importance and different meanings of nature activities and natural environments. Then, the relationship is examined by looking at how the nature activity days encouraged children to outdoor activity in nature.

6.1 Meaningfulness of physical activities

6.1.1 Role in everyday life

First of all, the children's views on outdoor activities in nature were charted by asking the question **“What role has nature played in your life?”**. According to the responses, the majority of the children considered nature activities rather important: they were enjoyable and frequent.

Of four options, the majority of the children (49–61% per survey) chose the alternative “I often move about in nature because being in nature is so much fun” (Figure 25). The alternative “I like to move about in nature, but do so fairly rarely because” was chosen by about a third of the children in the spring, slightly less than half of the children in the autumn and about 40 percent of the children in the winter. In other words, the share of those who liked to move about in nature but rarely did so grew significantly from spring to autumn but decreased again in the winter. Only one to three children per survey replied that they did not really care for moving about in nature or did not like it at all.

The answers showed slight differences between the schools. On the basis of this question, nature activities played a slightly more important role in the everyday lives of the children from the Finnish International School of Tampere than in the everyday lives of the other children. The respondents from Tampere chose the alternative “I often move about in nature because being in nature is so

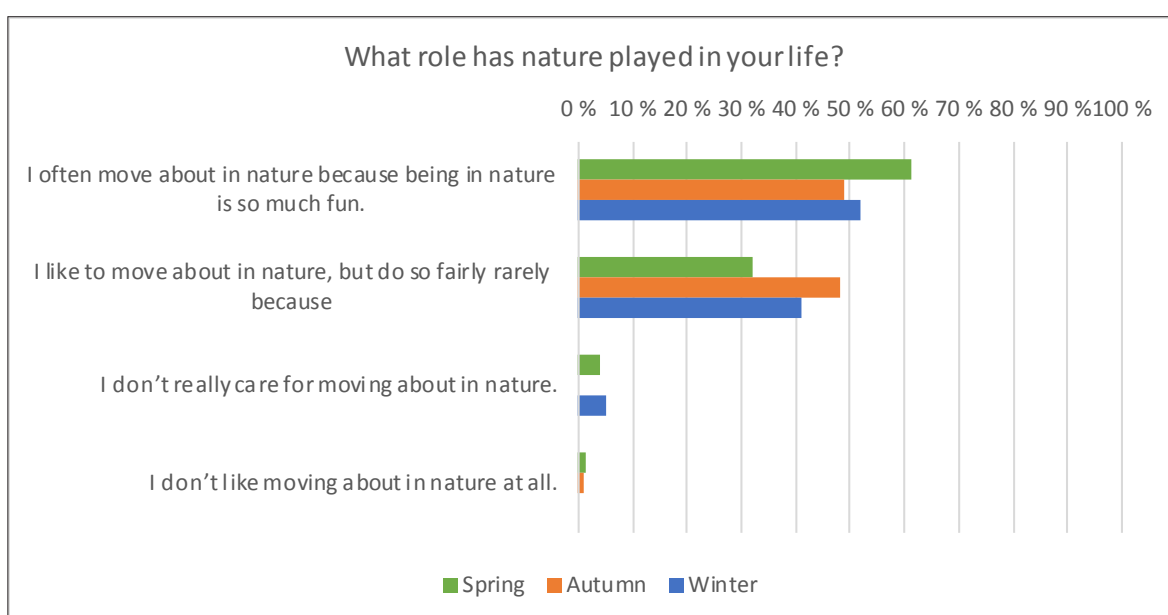


Figure 25. The significance of moving about in nature per survey.

much fun” more often than the respondents from the other schools. Only some pupils from Vuoniitty and Tammela responded either “I don’t really care for moving about in nature” or “I don’t like moving about in nature at all”.

The change that took place between the surveys was also slightly different when examined by school. In Tampere, the share of the most positive alternative decreased from spring (75%) to autumn (60%) and increased from autumn to winter (65%). At Riihivalkama, the share remained the same in the spring and autumn surveys (57%) and was largest in the winter survey (64%). At Tammela, the share decreased slightly from spring to winter (from 45 percent to 40 percent), and at Vuoniitty it decreased significantly (from 64 percent to 41 percent). Due to the small number of respondents, this change is created by the responses of only a few pupils.

After choosing “I like to move about in nature but do so fairly rarely because” the children continued the sentence with an explanation. All explanations are given in Appendix 5. The sentences emphasised lack of time and being busy as well as the amount of other activities, such as hobbies. Especially the last survey highlighted the experience of there being no time. Other common explanations were the absence of nearby nature, the lack of a desired company and being too tired. The “Other, please specify” category included things such as lack of motivation and suitable activities. Table 10 shows how many explanations belonged to one of the above categories. The response of one person may have been placed in more than one category.

From spring to autumn the share of those pupils who expressed that they liked to move

about in nature but did so rarely grew considerably in all classes. The change was most visible in the pupils of the Vuoniitty school: the number almost doubled – and at the same time the children’s active engagement in sports clubs increased. The time spent taking part in various hobbies can partly explain the fact that there is no time for nature visits on weekdays. This was also the case for the children interviewed, for example: *“I have so many hobbies and I’m always coming home late, then I’m almost like afraid to go into the wild in the dark”*.

The views of the children’s parents on what restricts the child’s access to nature were in similar to the children’s explanations. The dominant view was that nature cannot be accessed when time is spent doing other activities. Nearly 75 percent of the parents who responded to the survey following the intervention felt that restrictions were caused by the lack of time. According to 60 percent, access to nature was restricted by other hobbies. Lack of interest restricted access for less than one fifth. Weather conditions or lack of skills or knowledge and distance restricted the child’s access to nature according to about one tenth of the parents.

In the research data, experience of the lack of time is related to three issues. Firstly, it can be an indication that everyday responsibilities and activities are felt to take a lot of time. School days and homework take much time off the weekdays. For one of the interviewees, participating in household chores was the reason for not visiting nature on weekdays. Secondly, lack of time can be an indication of the prioritisation of other things, such as hobbies. However, youths who have a lot of

Table 10. The categories of explanations written given for the question “I like to move about in nature but do so fairly rarely because” by survey.

Explanation	Spring survey	Autumn survey	Winter survey
Lack of time	10 (48 %)	7 (25 %)	18 (72 %)
Other activity	2 (9 %)	9 (32 %)	2 (8 %)
Absence of nearby nature	2 (9 %)	5 (18 %)	0 (0 %)
Lack of company	4 (19 %)	0 (0 %)	1 (4 %)
Being too tired	2 (9 %)	5 (18 %)	1 (4 %)
Other reason	1 (5 %)	2 (7 %)	3 (12 %)

hobbies often have good opportunities to be active in unorganised leisure activities as well (Sharp et al. 2015). There are also indications in the material of this study that having a lot of hobbies is not directly linked to minor engagement in nature activities. This can be seen in how the children's views on the lack of time as an obstacle to nature activities became more common from autumn to winter, while the share of those who enjoyed sports clubs simultaneously went down. One of the interviewees described the shortage of time during weekdays as follows: "then when I have time, however, I don't do anything, and then when I feel like it, the time just disappears. I think it probably goes exactly like that". Thirdly, the perceived lack of time may also indicate that visits to the nature are not considered as easy an option as more usual activities, as they require particular effort or special arrangements. In the children's interviews, visiting nature was sometimes linked to the detachment from screen time. In the parents' survey replies, lack of time sometimes combined with distance or safety issues, which would suggest that special arrangements are needed to visit nature.

Screen time appeared to be both an easy and also important pastime option for the children. Spending time in front of screens of different types was one of the favourite pastimes of almost every other child. In several interviews, screen time was seen to have a link

with the infrequency of nature activities. The interviewees described the issue as follows, for instance: "Sometimes I just feel like I want to go out, when I haven't been for a long time and my eyes are hurting, when I've been using the phone so much and stuff" and as follows:

I feel like some people use, for example, their phone so much and don't make, don't do their school assignments and don't get interested in anything, or think that only social media and friends are important, not things like this anyway.

The children were also asked about outdoor activities in nature during school days; the children expressed their opinion on the amount of **nature activities during school hours**. After all the nature activity days, about half of the children thought that school days included the right amount of nature activities (Figure 26). Approximately one third felt that there was "perhaps too little" engagement in nature activities. More than one tenth of the children, on the other hand, said that there was "all too little" engagement in nature activities during school days, 14 percent of the children in the winter. Only a few pupils thought there were too many nature activities.

There were some differences in the responses between the schools. The pupils of the Tammela School Centre were more prone than others to think that there was all too

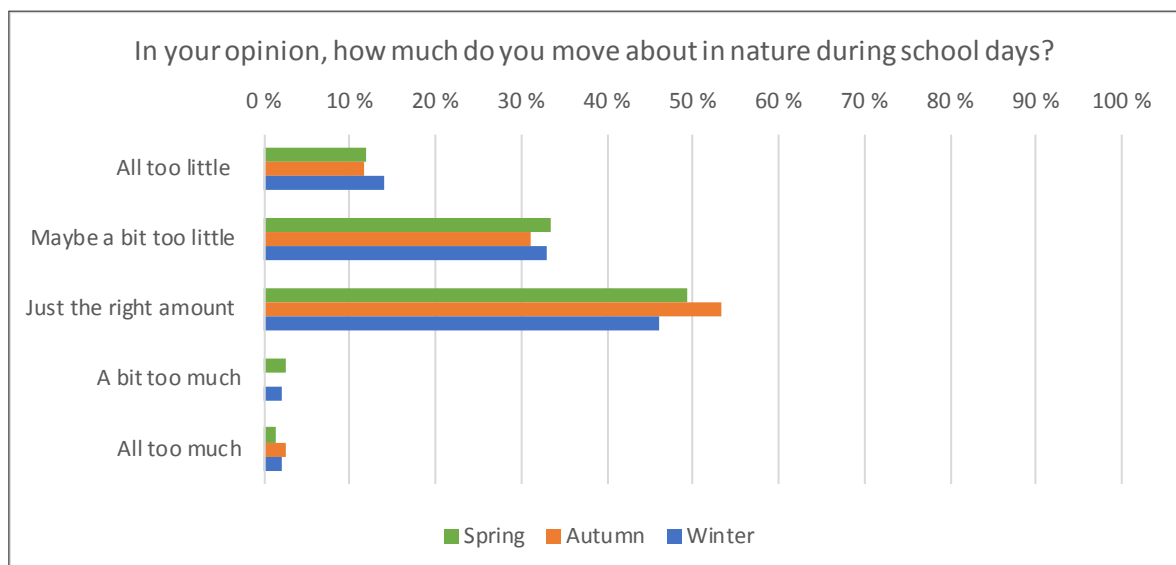


Figure 26. Opinions of the respondents on the amount of nature activities during school days per survey.

little engagement in nature activities during school days. After the last nature activity day, half of them were of this opinion. On the other hand, a clear majority of the pupils in the other schools thought that there was just the right amount of engagement in nature activities in the winter. In the spring, also a significant share of the pupils of Riihivalkama said that there were not nearly enough physical activities in nature, but their satisfaction increased by the winter survey. Almost everyone from Vuoniitty thought that the amount of nature activities was appropriate or somewhat lacking. The pupils of the Tampere School also considered the amount of nature activities mainly appropriate or somewhat lacking.

Thirdly, the **role of nature activities among the children's set of values** can be examined. The importance of "being and moving about in nature" was assessed as part of the list of

items (see Figure 27). Table 11 shows the responses per survey. The share of those experiencing outdoor activities personally very or fairly important was approximately 90 percent in each survey. The share of those considering it very important was 60 percent in the spring and approximately 50 percent in the autumn and winter. In other words, some of those who considered nature activities very important in the spring thought they were only quite important in the autumn and winter. Approximately five percent of the children did not find being and moving about in nature very important. In the first two surveys, one child did not consider this at all important, but in the winter no one selected this option. One possible explanation for the differences between the surveys is weather conditions.

The responses of the girls and boys differed slightly but only in the spring survey. In the

Table 11. Answers to the question on the importance of being and moving about in nature by survey.

Survey	Very important	Fairly important	Not very important	Not important at all	Cannot say or response unclear
Spring	60 %	29 %	5 %	1 %	4 %
Autumn	52 %	38 %	4 %	1 %	5 %
Winter	49 %	40 %	5 %	0 %	6 %

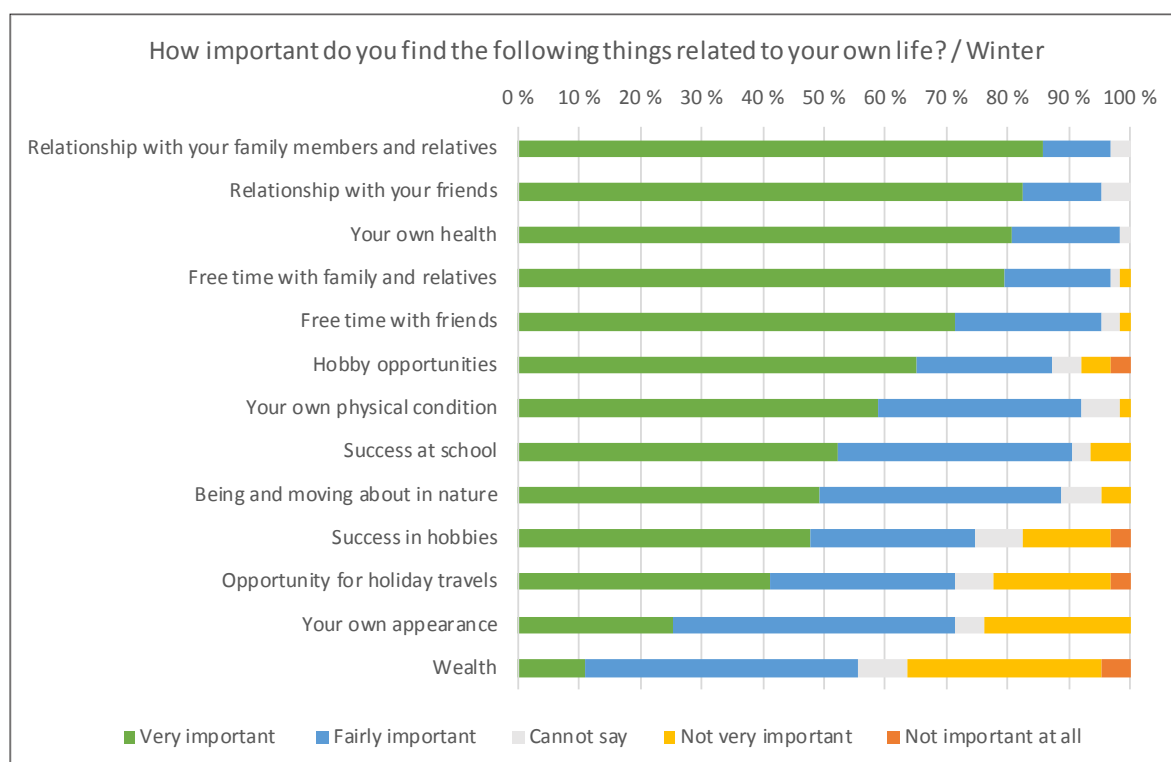


Figure 27. The importance of issues related to the personal life of the respondents in the winter survey.

spring, nearly 70 percent of the girls considered being and moving about in nature very important, while the number was only some 50 percent for the boys. There was a difference between the responses in the spring survey: the matter was considered very important by nearly two thirds of the respondents from Riihivalkama, about half of the respondents from Tampere and Vuoniitty and only by one third of the respondents from Tammela.

Of the values charted (Figure 27), most considered the relationship with their family members and relatives, relationship with their friends, their own health and free time with family and relatives very important – these also remained important for the entire year. Free time with friends, hobbies, physical condition and success at school were also very important to at least half of the children in all surveys. With the exception of hobbies, all the items listed were at least fairly important to approximately 90 percent of the respondents. When the values are compared, moving about in nature was considered more important than holiday trips, appearance, wealth and also success at hobbies. Hobbies were very important to more respondents than outdoor activities in nature. Hobbies were fairly important to approximately the same number of respondents.

6.1.2 Meanings

On the survey form, the children explained what they particularly liked about being and moving about in nature. The answers can be found in Appendix 6. The answers are categorized in Table 12. The table shows, per survey, how many answers included an item in that category.

Most of the respondents mentioned some item categorised as a sensory experience, such as peace, quiet, freshness or bird song. Almost one third of the respondents mentioned physical activities in general or some form of physical activity. Particularly nice things to do in nature included, for instance, walking and running along paths, climbing trees, riding a bike and walking the dog. Other enjoyable nature activities listed included things such as making huts, picking berries and mushrooms and nature photography. Seeing animals or plants or being close to them was one of the most important things in nature for about one eighth of the children. The feeling of freedom and freedom to move about were also some of the children’s most important experiences, every tenth response in the autumn. Many children also referred to the value of aesthetics. Other things that were particularly liked included socialising, such as moving about and being with friends, family members or a dog. Issues related to recreation, mental recovery and withdrawal were also mentioned.

Table 12. Categories for the items that appeared in the answers to the question “Which things do you particularly enjoy when it comes to being and moving about in nature?” per survey. The response of one person may have been included in more than one category.

Categories of things enjoyed	Spring survey	Autumn survey	Winter survey
Sensory experiences	23	23	26
Physical activity	24	23	20
Other activities	20	17	10
Animals and plants	9	9	3
Freedom	5	8	3
Aesthetics	8	4	3
Being social	2	1	5
Recreation and mental recovery	3	3	1
Withdrawal	3	0	1
Benefit	2	0	0



Natural peace was meaningful for fourth and fifth graders. Photo: Minna Jokinen / Metsähallitus.

In the winter, the social aspect of outdoor activity in nature was investigated by asking who the children most often did nature activities with. The majority of the children selected several of the alternatives given. Friends and parents accompanied the children just as often. Almost 70 percent of the children moved about in nature with a friend or friends and almost the same share with their mother or father. 40 percent of the respondents said they often moved about in nature alone. Moving about in nature with siblings was also fairly common. A fifth of the respondents moved about with a dog or with the class during school hours. One tenth of the respondents also reported that they moved about in nature with a hobby group. A few respondents also mentioned their grandparents, and one respondent mentioned a domestic animal other than a dog.

In the interviews, outdoor activity in nature and nature itself were often said to

counterbalance everyday life. This meaning is linked to an urban lifestyle and romanticism as a basis for a nature relationship (Simula 2012). Moving about in nature created sensory experiences that differed from the those of everyday life. They were particularly associated with natural peace, freshness and sounds. One of the interviewees said they liked being in nature because *“it’s at least fresh there and you can listen to birds singing”*. Seeking nature experiences also meant withdrawal to silence and being alone, often as a counterbalance to everyday life. One of the children said that nature is *“much more calm than the streets and things, for example, and going to practice”*. In the third example, peace and being alone are also connected to the revitalising aspect of moving about in nature; the interviewee said that they sought nature experiences *“when I’m kind of stressed and tired. For when I go there I just listen to music and walk around in the jungle, and then listen to the birds and the silence.”*The

fourth interview excerpt highlights natural peace as something the interviewee would like to an experience in their everyday life:

Interviewee: *In nature you can be in peace. And you can pretty much do what you want there.*

EH: *Mm-hmm. What kinds of things are they usually, the things you do there?*

Interviewee: *Well, I walk or run. Sometimes I can sit there and have a little think, something about that nature.*

EH: *Mm-hmm. What kinds of things?*

Interviewee: *Well just that, just how peaceful it is. Wishing it could always be so peaceful.*

The children’s answers also showed the importance of playing during nature activities and the utilisation of natural elements (see Hasanen 2017, Skår et al. 2016). Such activities included, for example, jumping over obstacles, speedy games with the dog and “letting off steam” by running around freely, stopping every now and then. Nature activities were also connected with its significance for physical well-being: “*you get physically fit and things like that when you jump around in there.*”

6.2 Importance of natural environments

The importance of natural environments for children is discussed here from two perspectives. The surveys provided information on the experienced importance of outdoor recreation areas. The interviews, on the other hand, highlight explanations for preferring certain types of natural environments for outdoor activity.

The survey asked about which recreation areas the children felt were important to them. All the outdoor areas listed in the question were at least fairly important to nearly two thirds of the respondents (Figure 28). The most important areas were lakes, the sea and rivers as well as nearby nature and forests, when looking at areas that were at least fairly important to most of the children across the surveys. The next most important areas were home gardens and nature at summer cottages as well as constructed and modified activity environments, that is, sports fields, cycleways, streets, playgrounds and school yards. Wilderness areas as well as saw dust tracks and hiking routes were the children’s least important places for outdoor activities. Other important recreation areas mentioned by the children included paths, shores and beaches, mires, the archipelago, roads and stables.

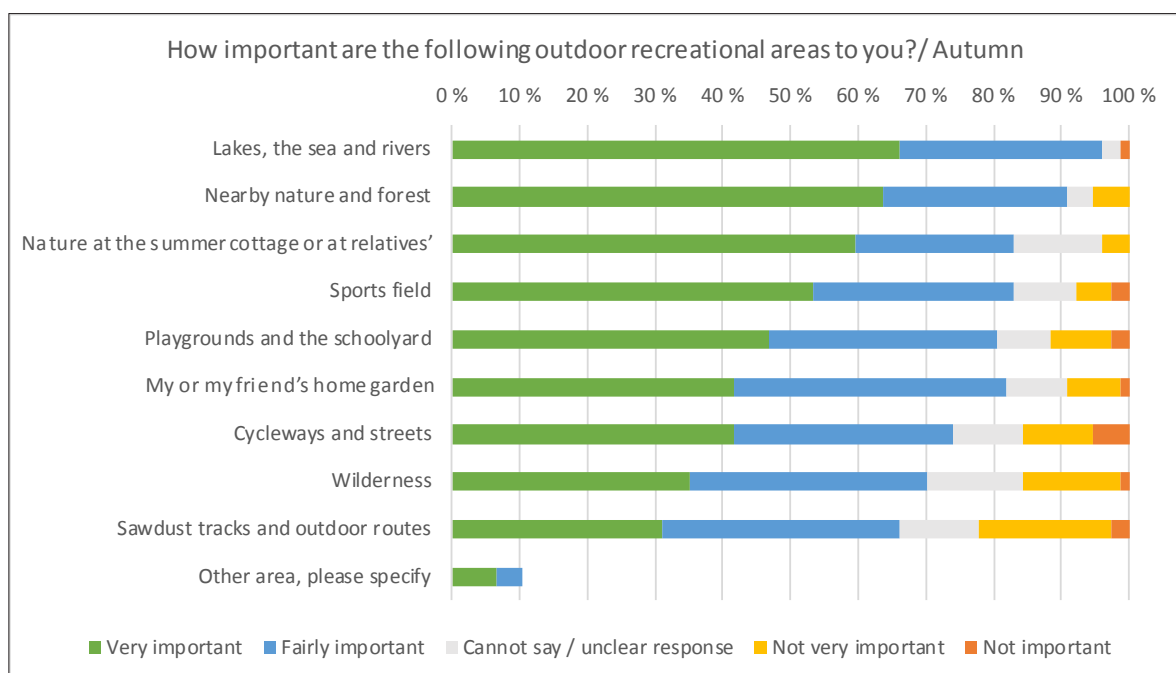


Figure 28. The importance of outdoor recreation areas for the respondents in the autumn survey.

Most of the children regarded various bodies of water, that is, lakes, the sea and rivers, as very important outdoor recreation areas. This answer was given by approximately 70 percent of the children. Nearly the same percentage of the children considered nature at the summer cottage or a relative's place as well as nearby nature or forest to be very important. About half of the children considered the sports field very important, except in the winter survey. One's own or a friend's home garden, playgrounds and the school yard as well as cycleways and streets were very important to slightly less than half of the children. Sawdust tracks and outdoor routes as well as wilderness areas were very important to less than a third of the children.

Figure 28 shows the children's opinions on the importance of different outdoor recreation areas after the second set of nature activity days, that is, in the autumn. Autumn was chosen because at that time the season is on average more favourable for outdoor activities than during the final survey.

Change in the children's views was examined by comparing the percentage of children who considered each place very important and at least quite important by survey.

There were no significant changes between the surveys in considering the places very important (Figure 29). The exception was the minor popularity of the sports field in the winter. From spring to autumn, playgrounds and the school yard as well as wilderness became slightly more important to the respondents. On the other hand, the respondents' own or their friend's home garden was not as important to as many people in the autumn as in the spring. The changes do not exceed ten percentage points, and the change of seasons should naturally explain some of the changes.

When comparing places that were considered at least quite important by survey (Figure 30), the responses can be seen to remain fairly similar from spring to autumn. Nearby nature or forests as well as lakes, the sea and rivers became slightly more important. Similarly, home gardens were found to be slightly more important in the autumn than in the spring. In the winter, several children considered many places moderately important. In the winter, cycleways and streets were somewhat surprisingly at least quite important to up to 85 percent of the respondents, while in spring and autumn they were important to about



Figure 29. The percentages of respondents who considered an outdoor recreation area very important per survey.

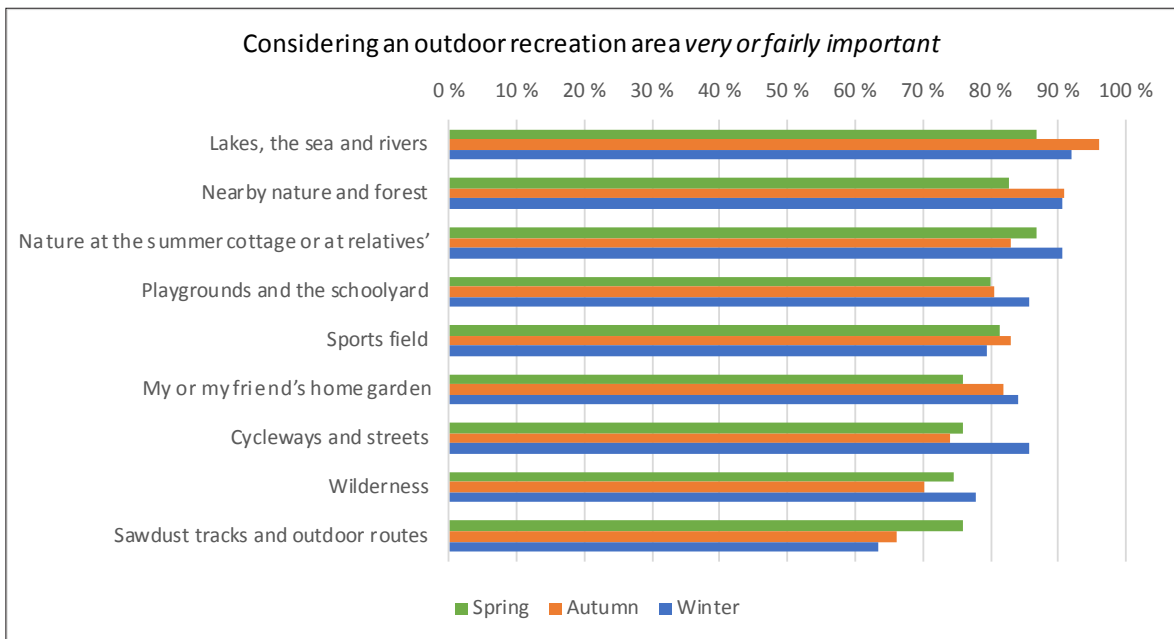


Figure 30. The percentages of respondents who considered an outdoor recreation area fairly or very important per survey.

75 percent. For most people, the nature at summer cottages and at relatives' as well as playgrounds and the school yard were also moderately important.

There were some differences between the responses of the girls and boys. On average, outdoor recreation areas were slightly more important to the girls than to the boys; on average, 86 percent of the girls and 75 percent of the boys considered an area to be at least fairly important. Cycleways and streets as well as sports fields were more important to the boys than for the girls. On average, all other places were more important to the girls. For example, nearby nature or a nearby forest was very important to about three quarters of the girls and about half of the boys. It is worth mentioning that in the winter nearby nature or a nearby forest was at least fairly important to each of the girls who had responded. For the boys, the share was 80 percent. Even in the autumn, almost all girls considered the nearby nature or forest as well as lakes, the sea and rivers to be at least fairly important to themselves.

The difference between the schools was also examined as an average of the results of all surveys on the basis of the option "fairly important". When reading Table 13, it should be noted that there are small differences

in the percentages due to the difference in the numbers of respondents and that also a slightly greater difference in the percentages means that only a few students responded differently.

Lakes, the sea and rivers were at least fairly important places for approximately 90–95 percent in all classes. Nearby nature or forest was at least fairly important to approximately 80–90 percent of the children in all classes. In other words, there were only a few children per class who did not consider these areas important. Also on average, nature at the summer cottage or at the relatives' was almost equally important in all classes. For the Tammela School Centre pupils, home gardens, cycleways and streets were on average more important than for pupils in the other schools. For the pupils of the Finnish International School of Tampere, playgrounds and the school yard were remarkably important. The difference between the importance of playgrounds and school yards was fairly great, especially when compared to Tammela and Vuoniitty. The children in Tampere considered saw dust tracks and hiking routes important more often than the children in the other schools. The pupils of Vuoniitty stand out slightly due to the fact that cycleways and streets were not quite as important to them as

Table 13. The average share of respondents who considered outdoor recreation areas to be fairly important in the surveys.

Outdoor recreation area	Riihivalkama	Tammela	Tampere	Vuoniitty
My or my friend's home garden	77 %	92 %	77 %	76 %
Cycleways and streets	78 %	86 %	80 %	70 %
Playgrounds and the schoolyard	90 %	69 %	97 %	74 %
Sports field	74 %	79 %	82 %	87 %
Nearby nature and forest	85 %	83 %	92 %	90 %
Sawdust tracks and outdoor routes	63 %	69 %	82 %	59 %
Nature at the summer cottage or at relatives'	85 %	89 %	90 %	83 %
Lakes, the sea and rivers	92 %	89 %	95 %	91 %
Wilderness	85 %	71 %	82 %	64 %

to others. On average, wilderness areas were slightly less important to them than to others.

During the interviews, the children told about their preferences regarding natural environments and explained the reasons for their preferences. For the children interviewed, nearby forests can be regarded as the most important areas for outdoor activity in nature. *"I love going to, for example, all the forests"*, said one of the interviewees. Another one said: *"Forests are the only place I visit usually. Because it's quiet and you can see those birds"*. Shores were also very enjoyable places. *"It's really nice to be by the water. And over there in the forest just, to be. It's pretty nice"*, described one of the interviewees. The interviewees also talked about parks and playgrounds and certain rocks.

Explanations for liking certain places were linked to the experience of peace, silence and other sensory experiences, ways and meanings of moving about, nearby location of the site, being together with the family, pets or domestic animals, the existence of plants, presence of animals and aesthetics. The meanings are discussed in more detail in chapter 6.1.2, as the meanings of moving about in nature were discussed together with the significance of natural environments.

The interviews showed that feelings of discomfort and fear are also experienced in natural environments. Difficult conditions in nature such as thickets and dense forest areas as well as slush and wetness were considered unpleasant. Fears were mentioned by the interviewed girls who lived in cities. For two of them, moving about in parks was affected by their fear of aggressive large dogs. For one of them moving around in the forest was affected by her fear of getting lost. The proximity of the road and the presence of people were determining factors of their preferred natural environments:

Perhaps in the forest if there is a slightly larger road or like a path, and then it's fun maybe not in the middle of the forest but next to a large road somewhere. Because I'm always afraid that if I go too far into it, then I don't know how to get out. --- It's somehow brighter and you see other people all the time, and you see a little what's happening on that road.

6.3 Outcomes of the Nature Activity Days

6.3.1 Inspiration to move about in nature

One of the objectives of nature activity days was to provide children with experiences that would encourage them to continue to engage in outdoor activities in nature. Based on the survey data, it is possible to assess the success of this task by examining the children's responses to the question "Did the nature day(s) inspire you to move about in nature more than before?"

Figure 31 shows the children's responses per survey. After the first event, less than one third of the children said that the nature activity day inspired them to move about "a lot!", less than one third chose "quite a lot" and about one third selected "a little" more than before. Five percent said the event did not inspire them to move about more at all. After the second event, the proportion of the most enthusiastic children was significantly lower. Now the majority of the children, approximately 40 percent, said they were "a little" more inspired than before. After the third event, "a lot!" was selected by only one tenth of the children, and an equal share said that the day had not inspired them to move about more at all. In the winter, "quite a lot" was chosen by one third and "a little" was selected by over 40 percent.

The children's responses should be examined in relation to role outdoor activity in nature played for the children before the nature activity day. In the winter survey, the respondents could explain their answers, and most of the justifications written by the children had the same message: the child moved about in nature a lot anyway or as much as they felt was possible in their daily lives.

Figures 32, 33 and 34 show the answers so that the children are grouped according to the answers to the question "What role has nature played in your life?". Based on this, the majority of those who were inspired to move about more "a lot!" were also those who did a lot of nature activities already (green). Similarly, the majority of those who were inspired only "a little" were those who liked to move about in nature but did so fairly rarely (blue).

The girls answered the question slightly more positively than the boys. Those who were inspired "quite a lot" or "a lot" were more often girls, and those who were "not at all" or "a little" inspired were mostly boys.

By school, the majority of the children who were highly inspired came from the Riihivalkama School in the spring and autumn surveys. In the winter, none of the children from Riihivalkama felt that they were a lot more inspired than they had been before. In the winter, most of those who were a lot or quite a lot more inspired came from the Finnish International School of Tampere. In every survey, most of the children from Vuoniitty answered that they had been a little or quite a lot more inspired. The majority of the children who were not inspired at all were from the Tammela School Centre in every survey.

The engagement in physical activities or the experienced amount of nearby nature was not clearly associated with the amount of inspiration.

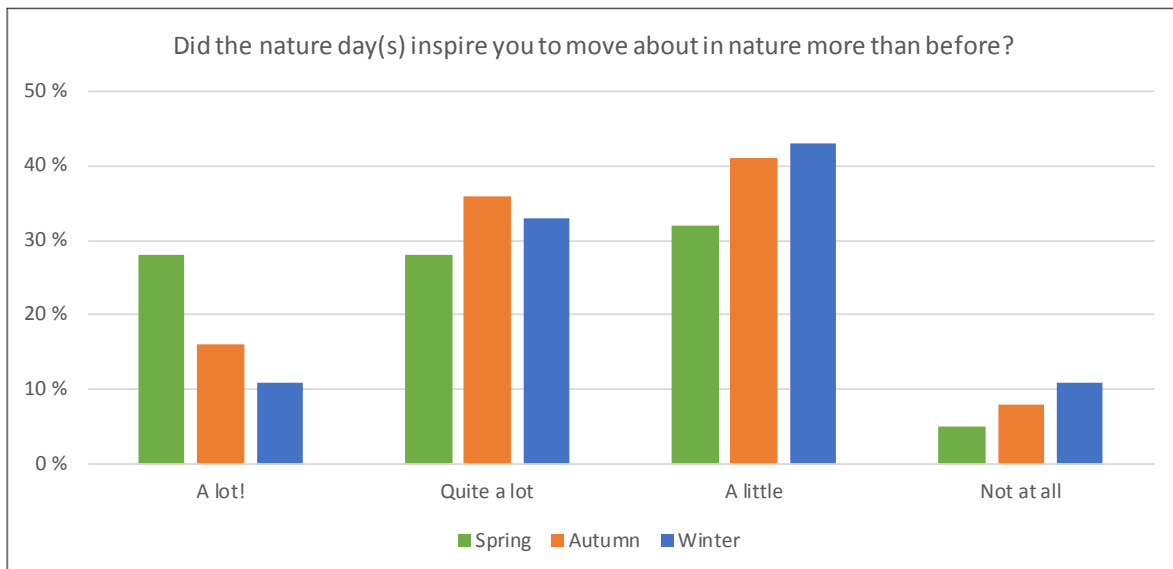


Figure 31. Inspiration to move about more in nature after the nature activity days per survey.

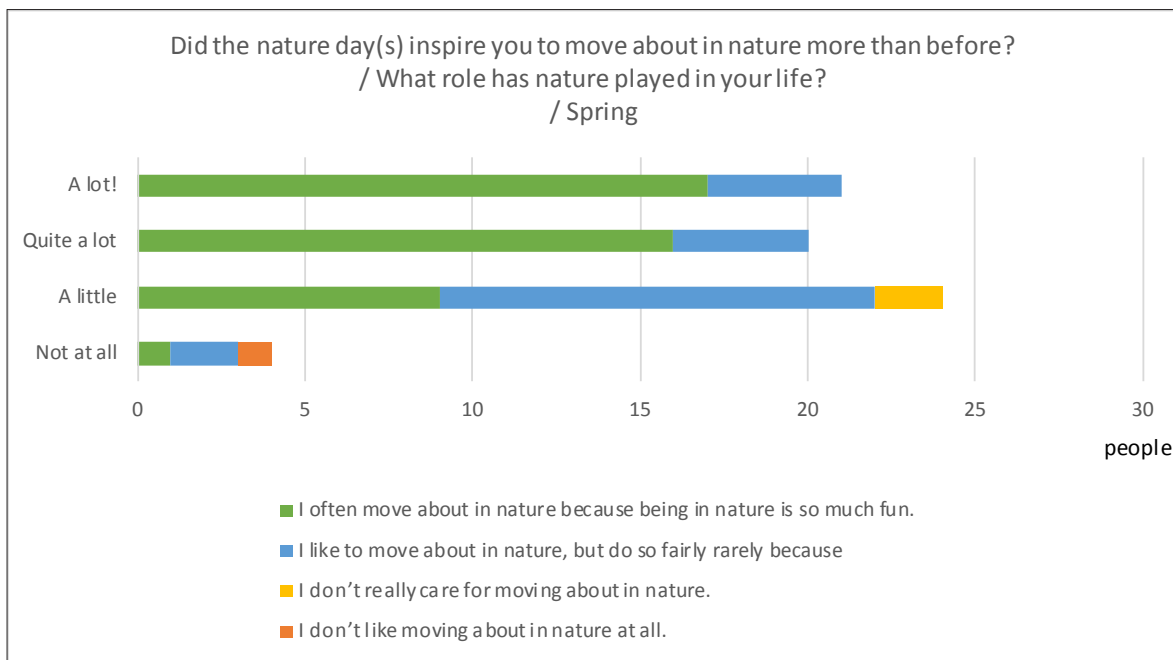


Figure 32. The nature activity day's ability to inspire moving about in nature in relation to the significance of moving about in nature. Responses in the spring survey.

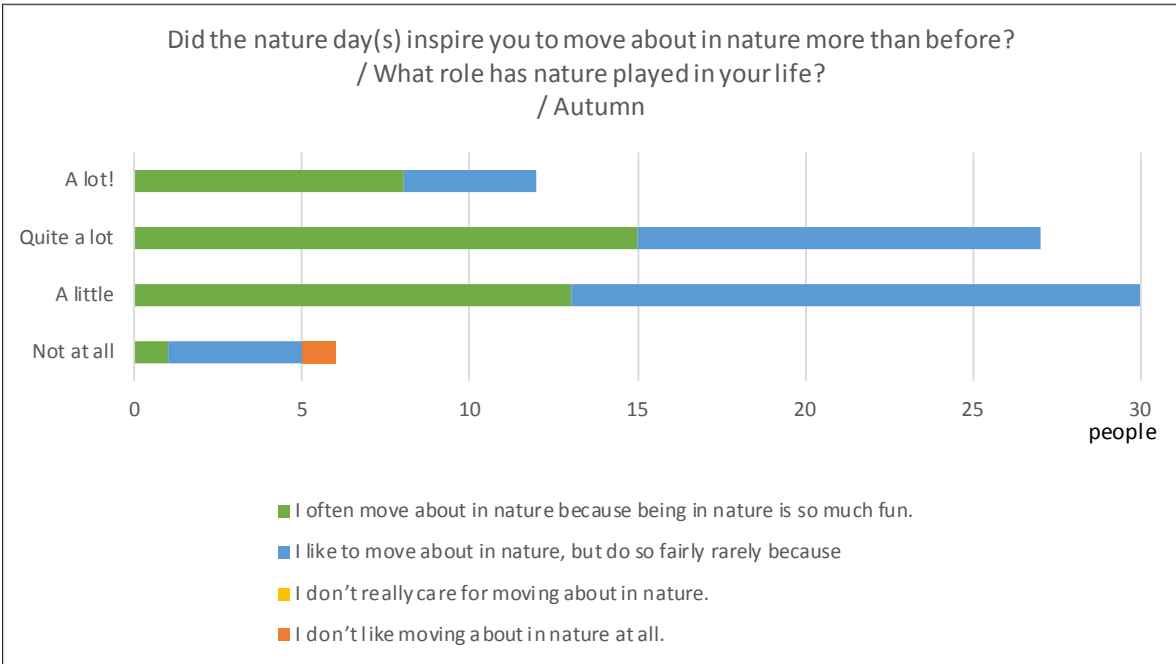


Figure 33. The nature activity day's ability to inspire moving about in nature in relation to the significance of moving about in nature. Responses in the autumn survey.

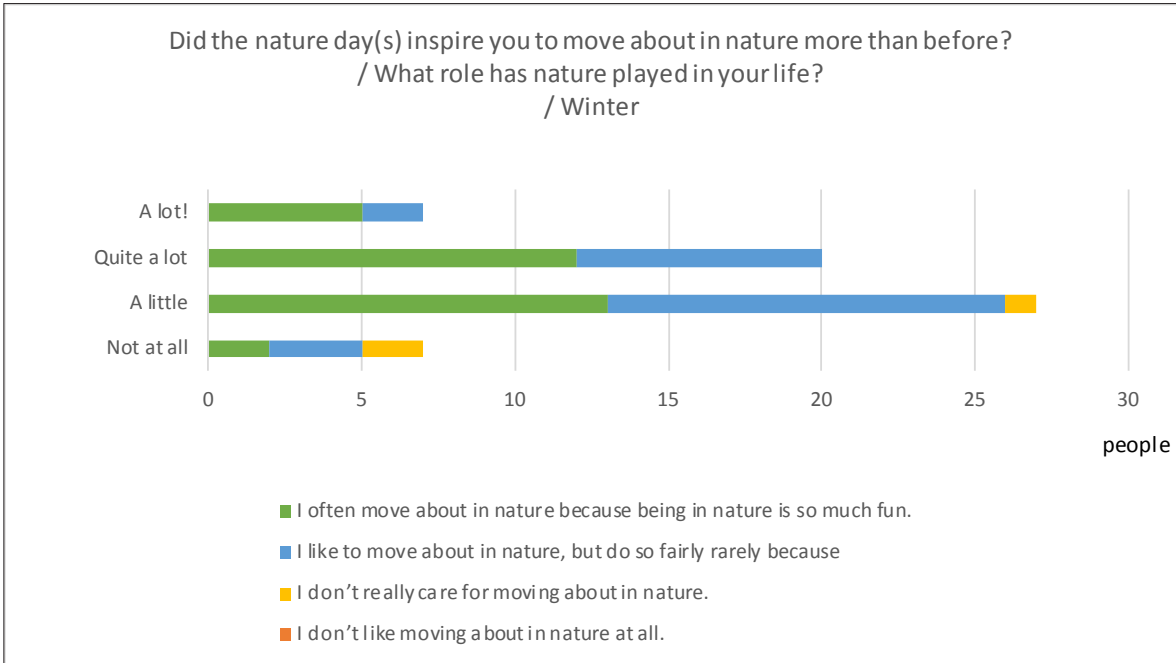


Figure 34. The nature activity day's ability to inspire moving about in nature in relation to the significance of moving about in nature. Responses in the winter survey.

6.3.2 Outcomes as reported by the children

During the interviews, the children told about the outcomes of nature activity days, both during the days and afterwards in everyday life. Many seemed to have created a closer connection to nature as a result of the intervention. These children seemed to now have found things in nature that were of greater significance to them than before. Some of the interviewees reported that the effects of participation were not significant.

The outcomes of taking part in the nature activity days included improved group spirit and relationships with friends, enthusiasm and models for physical activity, knowledge and skills related to nature, understanding of the usefulness of nature activities for mental well-being and physical condition, experiences of ability and courage as well as aesthetic experiences and feeling refreshed.

The strengthening of the sense of social relations and cohesion in the school class was clearly noticeable and very meaningful to the children. Similar perceived effects of nature activities have also been observed in

another Finnish study targeting the same age group (Paukkeri 2014). The children spoke of the improved team spirit of the class in the following manner, for example: *“It is no longer like if I say something wrong or if I say something badly, or like someone starts laughing, so, that doesn’t happen anymore”*. Improvements in the team spirit can have a wide range of effects on the everyday life at school, as the following interview excerpt demonstrates:

Interviewee: *There was like a little bit in the spring, and then in the autumn a little and then in the winter a little, and then that became like a bigger, team spirit.*
EH: --- *Can you tell me how it shows, for example?*

Interviewee: *Well like, for example girls can just as well sit next to boys, they don’t need to avoid them like ‘yuck, there’s a boy’ or something. And then you can say like anything to someone else. And then if someone says something that’s a little funny or makes a mistake, then they’re not laughed at but cheered on more.*



Participation in the nature activity days was significant for friendships and group spirit. Photo: Lassi Puhtimäki.

Many of the children said they were inspired to move about in nature more due to the nature activity days. For example, some started to go jogging more often or took the dog out into the forest instead of the normal route along the road. The increase in enthusiasm was described as follows, for example: “I at least got an inspiration, how I would spend time outdoors more at home too,” and as follows: “I got more inspired to spend time outdoors in all kinds of ways, more. And then I just got a lot more eager to do everything”.

The children were not only more inspired to move about more but also received “new styles of doing”. The following interview excerpt shows the significance of the new activity models.

Interviewee: *[I got] like joy to go into nature.*

EH: *Can you give me examples of how it shows?*

Interviewee: *Well, for example, when there were those, when we went there, we walked, so I just feel like I want to walk more in nature.*

EH: *Mm-hmm. What else did it give you?*

Interviewee: *Well, try out more things. There were things there too that I didn't try, so I can try them sometime later then.*

EH: *Mm-hmm. Is there something you're thinking about now, what would you like to try?*

Interviewee: *Well, let's say, maybe paddle a canoe.*

The enjoyability of the activities was one of the explanations given by the interviewees for why participation inspired them to move about in nature more. Another explanation was the special nature of the activities, that is, how they differed from everyday activities and normal exercise. These explanations appear in the following interview excerpt.

Interviewee: *Like it was always so much fun, that you feel inspired to go jogging and things like that at home too.*

EH: *--- What do you think, why did you get enthusiasm and inspiration out of this?*

Interviewee: *Probably because there hasn't been anything else like this. Since this has been like special. So then you think that you could try like doing these same things at home too, and just those things that you thought were fun, and then you can do something at home too.*

One of the interviewees explained their increasing enthusiasm, which was related to a sense of knowledge and ability:

I've become more enthusiastic because nobody was criticising if I did something wrong, or anything like that. So that's how I've got like more courage to do everything. --- Because people come and criticise if you do something in a wrong way, so there was no one there who would criticise you or start talking about how wrong you're doing everything. I mean that always makes you feel bad. Because I don't always know how to do everything, I mean when I'm trying something out for the first time, I mean if there was someone criticising me, then I'd probably just stop doing all the things I like.

This means that lack of criticism and excess guidance appears to have encouraged the child to be active in different ways. The interviewee did not feel that anyone had set too high performance standards for them. In other words, doing physical activities without any skills was also allowed during the nature activity days. This kind of allowance can be of great importance, especially for the experiences of children who have not been physically very active before or who are less skilled. Getting engaged in nature activities would then not be hampered by reasons related to one's own coping or lack of athletic talent which often prevent participation in common sports or physical activities (see Hakanen et al. 2019, p. 23).

The well-being effects subjectively experienced by the children increase the significance of nature activities. During the interviews, the children described the good feelings they experienced during the days. They included

fun and comfort, alertness, joy of being together and safety. Children also showed that they had received experience and understanding of the effects that everyday nature activities can have on mental well-being and physical condition.

The children thought that the physical activities of the nature activity days had benefits for their physical condition. They stated, for example: *"You get more fit of course"* and *"It was just like a really good exercise for me. --- Like it was really good for my thighs and legs."* Physical activities were seen as having an impact on getting sleep: *"Because I moved a lot and then in the night I slept really well. And in normal days I can't sleep. --- I was tired and I slept really well. So I thought that maybe I should move a little bit more, like in natural life"*.

The following quotation describes how participation caused one of the interviewees to see the significance of everyday nature activities and also to change their behaviour:

Interviewee: At least I received a lot of information that I should go outdoors and do some physical activities. That it's a good idea to get some exercise and then you can do something else, do a little school work again, for example, and then go into the wild again. And then, yeah, that's how it goes.

EH: Right. Have you done that now, then?

Interviewee: Yeah. Usually. If I don't have practice, then I just go out there for a walk and then come inside and do some school things and then I take the dog out.

The accumulation of knowledge and skills related to nature was also appreciated. Knowing how to move about in nature, campcraft and knowledge related to the environment were mentioned. One of the interviewees described the matter as follows: *"I feel like I became much smarter when I was there. I don't know why, probably because I learned about those animal and plants and things like that."* This also inspired going into the wild: *"When you got that information, you could, for example, see whether there are some special plants or*

some mushrooms over there in our --- forest. So then you go and have a look".

One of the interviewees felt that learning new things had been the most important outcome for them and that otherwise participation had had no impact. They explained that they had already had a close connection to nature and nature activities. They told they had already been a frequent nature goer in the past and said: *"I already liked the nature, it didn't really add anything"*.

A close post-intervention connection to nature also emerged in other ways, although the effect of the intervention on the following experiences cannot be accurately shown based on the data. Enjoyment of nature, empathy towards living creatures, feeling of inclusion and responsibility were present in the data. They are noteworthy dimensions of nature connection, as they have been found to increase children's interest in nature activities and environmentally friendly behaviour (Cheng & Monroe 2012). Enjoying nature was reflected in the material in a number of ways, most notably as sensory experiences and strong feelings, such as "loving" the forest and appreciating peace. Empathy and togetherness emerged prominently in the responses of one of the interviewees. For the child, animals were desired company that were to be treated with respect. For example, they said they wanted to "be friends with a squirrel". Sense of responsibility, on the other hand, appeared as the willingness to protect the environment. For example, one of the children told at the end of the interview that they would like to say that *"nature is a beautiful place, and it mustn't be littered and it must be visited"*.

7 Significance of the Results

7.1 Central results and message

The study examined how the children who participated in the interventions of the Moved by Nature project during 2018–2019 experienced different forms of nature activities and investigated their relationship with outdoor activity in nature. The analysis was based on the experiences of the children (n = 81), who took part in an intervention during three different seasons.

What kinds of nature activities did the children enjoy and what was meaningful to them? The data analysed in this study provided an opportunity to examine the children's experiences of various forms of outdoor and pastime activities. The contents of the nature activity days varied depending on the types of nature activities suitable for different seasons, for instance. The intervention spanned three seasons and assessed a wide variety of forms of nature activity from the more typical hiking

to the more special pump trolley excursion and adventure tasks. Based on the data, it was possible to identify factors that strengthen children's experience of meaningful and rewarding nature activities.

The intervention was set against the background of self-determination theory (Deci & Ryan 2008), according to which human motivation is guided by three basic psychological needs: 1) the need for autonomy, that is, the desire to guide one's own activities from one's own starting points, rather than being controlled by others, 2) the need for competence, that is, the need to experience feelings of competence and success, and 3) the need for relatedness, that is, the need and desire to have contact with other people and to belong to a group. The fulfilment of all three basic needs is considered a precondition for motivation (Deci & Ryan 2008). According to research, guided physical activities that support the autonomy, competence



The intervention featured various activities during three seasons. Photo: Lassi Puhtimäki.

and relatedness needs of children and youths seem to strengthen the internal motivation to be physically active (Hynynen & Hankonen 2015, Owen et al. 2014). When examining the children's experiences of the nature activity days, the factors that make nature activities enjoyable and meaningful for the children are consistent with the theory presented above. The particularly positive experiences of the children highlighted the elements of freedom, independence and adventure, the elements of trying out new things, learning, challenging oneself and success as well as the elements of being together, friendship and community spirit.

Here, the significance of the results is presented firstly according to the categorisation of the background theory, secondly by looking at the preferred forms of physical activity and thirdly by considering the role of outdoor activity in nature in the everyday lives of the children.

Experiences of freedom and independence

The experience of freedom during physical activities and other pastimes was an important to the children during the nature activity days. It meant, for example, the freedom to choose the form of activity and freedom to move at one's own pace, in the direction chosen and with the objective set by the child themselves. The activities of the nature activity days were framed by adults, but as the intervention progressed, the children were offered more time and space for unstructured activities within these frames. This was guided by the feedback received from the children.

The significance of freedom in moving about in nature can be linked to the factors that characterise children's everyday lives. The everyday lives of children and youths largely consists of time spent in adult-led institutions, such as schools and hobbies, and in functionalised places, such as classrooms and sports venues (Aitken 2001, Itkonen 1998, Kallio 2010). Thus, independent activities are meaningful as they provide freedom, detachment from the standards, tasks and objectives set by others and opportunities for playfulness

and agency (Hasanen 2017). During the nature activity days, the children appreciated and also used the opportunities for independence.

During the nature activity days, the feeling of freedom was furthered by nature as an operating environment. Natural environments have been found to provide a particularly suitable, encouraging and open space for self-initiated activities (Skår et al. 2016). In terms of the development of the children's and youths' nature relationship, it is important that the children and youths have the freedom to get know the natural environment on their own terms, as it promotes an experienced attachment to the place (Skår et al. 2016).

The children often assessed the guidance of the activities as the least fun element of the activities. The essential principle in guidance is that it enables learning experiences that are important to children and at the same time ensures the safety of the activities. Instructors should remember to leave room for the children's own reasoning and strengthen the sense of the children's autonomy, for example, by listening to the children's opinions. Children's eagerness to be set "free" in nature should not be suppressed with excessive guidelines, such as those perhaps used at school and hobbies. Instead, the enthusiasm to move about in nature and the feeling of freedom and independence must be nurtured. Guidance should be done in a way that intrigues the child. Giving instructions in the wild, for instance while sitting on a mound, can make the situation more motivating for the child than giving the instructions indoors.

Therefore, particularly the relationship between adult-led and self-initiated activities should be taken into account when planning nature activities for children and youths. Providing room for autonomy can help in finding the significance of physical activities and creating an attachment to nature. Providing room will also promote the agency of children and youths, but leaving things unplanned will require pedagogical courage (Kangas et al. 2018). Discretion should also be used with respect to each individual group of children, as stated by one of the teachers involved in the intervention.

Experiences of ability and competence

Meaningful experiences during the nature activity days included learning new things, getting new experiences, challenging activities and exceeding one's own expectations. The activities offered a suitable challenge, making it possible for the children to experience their own abilities, even courage. Children exceeded their own expectations by moving in a new environment in new ways, which has been connected to the strengthening of the experience of competence (Paukkeri 2014, p. 29–30, Telama 1992). The physical activities were sufficiently free and the performance objectives sufficiently loose, which contributed to the children's experiences that their abilities and skills were sufficient. Reasons related to the lack of athletic talent and issues of self-sufficiency have often been found to prevent participation in physical activities (Hakanen et al. 2019, 23). At the nature activity days, the lack of criticism supported the experience of ability together with the freedom of move about at will.

Learning new things proved to be an element that was systematically enjoyed during the nature activity days. The fourth and fifth grade participants were characterised by their desire, joy and ability to learn about nature and nature activities (see also Paukkeri 2014). Based on the children's experiences, this age is favourable for the development of skills and knowledge as well as nature-related values. It is therefore justified to include environmental education in nature activities targeted at the age group.

Experiences of relatedness and being together

Working together strengthened the social relationships and sense of solidarity of the school classes. The outcomes of the intervention for social and mental well-being in the everyday life at school was clearly visible and particularly meaningful for the children. It was felt that the nature activity days had both enabled spending quality time together and had a favourable impact on friendships.

Nature activities have also been observed to have a similar impact in other Finnish studies targeting the same age group (Paukkeri 2014).

Cooperating with classmates during the nature activity days was seen as more meaningful than competing against them. Some of the activities included playful competing, and the children's attitude towards competition was the element that most clearly divided the participants into two groups. Slightly less than half of the children liked the competitive activities, while a significant proportion of the children did not consider competing as a fun element. An activity could be experienced as competitive even though the guidance emphasised that it was not a competition. It is important to pay attention to the experiences of competitiveness, since in recent studies competitiveness has emerged as a major disincentive for engaging in physical activities (Hakanen et al. 2019, Koski & Hirvensalo 2019). The observations also guide consideration of how the issue should be taken into account in the common forms of nature activities in physical education, such as orienteering and skiing, which are easily experienced as competitive forms of exercise. Competition divides opinions, so if the objective is to make nature encounters a positive experience for the majority of school children, it is important to also offer a non-competitive alternative during nature activities.

The characteristics of nature activities and different activity forms are good ways to promote the objectives of community spirit and grouping (Kangasniemi et al. 2009, Marttila 2016). The findings of the study also support the idea that cooperation and a sense of community are meaningful objectives for children participating in physical education (see Lyyra et al. 2019).

These factors may well be very important in preventing bullying and exclusion. Nature-based methods that support grouping have previously been developed and evaluated on the basis of this premise among youths doing vocational studies, for instance, in a previous project of Metsähallitus (Vähäsarja 2015) and in a doctoral dissertation that applied experience and adventure pedagogy

to the curriculum (Marttila 2016). The curriculum of comprehensive school also supports the methods of experience pedagogy that promote grouping.

Forms of nature activities preferred by children

Among the nature intervention activities, the children found roaming around freely an extremely pleasant way of moving about in nature. More than two out of three children felt that going on these unstructured adventures was “ace”. The pump trolley excursion, paddling, swimming and building with snow were also among these so-called top experiences for the children. In general, new and challenging experiences were considered inspiring. Traditional games were perceived as a fun way of doing things together.

Compared to other nature activities, walking and sitting around in nature were assessed as top experiences slightly less frequently. It is worth noting, however, that four out of five children still felt positively about them. Hiking, snowshoeing and dragging sledges were also evaluated as top experiences less often, but they were still often regarded as nice activities. Long transitions from one location to another required physical stamina and tolerance for monotony. Lengthy and leisurely activities improve children’s aerobic fitness, which is why they should also be part of the contents of children’s nature activities. The children’s responses made it clear that knowing the length and objective of the journey helped with coping. In the children’s own descriptions, the link between effort and reward was not evident, but based on the researchers’ observations, making an effort was often followed by the feelings of success and achievement.

Outdoor activity in nature should include memorable and top experiences. Although the aim of the study was to define outdoor activity in nature which the children find fun and meaningful, the aim is not to encourage only the provision of top experiences and the elimination of “dull” activities. Activities of both kind are needed to balance each other



Nature encourages independent activities and getting to know the environment. Photo: Johanna Ahtiainen / Metsähallitus.

out. Opportunities for leisurely and even monotonous physical activity can counterbalance performance-oriented everyday life and act as experiences that promote development and growth.

The children reported that in their everyday lives they normally moved about in nature in the usual manner, for instance by walking or running. There is no reason or possibility to make top experiences a part of the everyday lives of children. Rather, opportunities should be provided for nature activities that can be realised in a sufficiently simple manner within the framework of everyday schedules and environments. However, it should not be assumed that today’s children who are used to playing in constructed activity parks would not also expect memorable experiences, adventures and enjoyment from moving around in the wild. It is therefore beneficial to shake up the traditional conception of nature activities also in physical education.



Children who took part in the intervention received important experiences of many nature activities and the well-being effects of nature. Photo: Minna Jokinen / Metsähallitus.

The role of nature activities in children's everyday lives

What role do nature activities play in the everyday lives of children? The study looked at the relationship between children and their nature activities by addressing the experienced importance and various meanings of physical activity and natural environments as well as the outcome of the nature activity days. Thus, the research provided information on the role of nature activities in the worlds in which the children live and in the physical, social and cultural reality that surrounds them daily. The impact of the intervention is linked to these issues. Engaging in nature activities is not only dependent on the children's motivation, and the research results also report on children's experienced impediments to outdoor activity in nature.

On the basis of the data, the intervention promoted children's socialising into nature activities by familiarising them with nature and various outdoor activities in nature, by providing personal experiences of the well-being effects of nature and by promoting the

discovery of important personal meanings. As a result, the intervention succeeded in strengthening the nature connection and physical activity of the children and promoting their well-being (cf. Calogiuri 2016, Capaldi et al. 2014, Hartig et al. 2014).

For children, meaningful nature activities are the sum of several factors and not the same for everyone or all the time. The suitability of forms of physical activities is combined with other factors that are meaningful to children. In the worlds of meaning of the children involved in the intervention, nature was, above all, a multifaceted counterbalance to everyday life. In accordance with the urban, romanticism-based nature concept prevalent in Western countries (Simula 2012), nature activities provided children with sensory experiences and peace, recovery and withdrawal as well as freedom and playfulness. It was described as a desired counterbalance to school work and the urban environment, especially, but also to screen time.

For the children, nature also provided desired contacts with animals and plants.

Outdoor activity in nature was also a social activity, and being together with friends, family members and the dog. Positive nature experiences and the time spent in nature together with others may also have far-reaching effects in adulthood, and therefore meaningful experiences of outdoor activity in nature should be made regularly possible in the everyday lives of children (see Calogiuri 2016).

Approximately 90 percent of the children regarded being and moving about in nature as very or fairly important to themselves. For the children studied, particularly important outdoor environments were lakes, the sea and rivers. The next most important areas included nearby nature and forests as well as home gardens and nature at summer cottages. A nearby forest was very important to three in four girls and half of the boys. Only after these came fields, pedestrian and bicycle ways, playgrounds and school yards. All of these environments were important environments for physical activities for at least two thirds of the respondents.

The results of the importance of outdoor recreation areas are more indicative of attitudes and attachments to places than of their actual use. Finnish studies (e.g. Hasanen 2017, Kaivola & Rikkinen 2003, Mäkinen & Tyrväinen 2008) have observed that children and youths enjoy nature sites. There are many important meanings associated with nature sites in childhood and youth, and staying at and moving about the sites are considered meaningful for various reasons, but this does not yet indicate the regularity of the use of the sites. Accessibility is also not necessarily linked to how much nearby nature is used by children (Gundersen et al. 2016).

Efforts to promote children's physical activities have been more clearly evident in the investments in constructed environments than in nature sites. However, the importance of natural environments, particularly local nature, on the physical activity of children is significant. It is possible that independently organised nature activities result in a greater amount of physical activity than, for example, guided team practice indoors. According to a study based on objective measurements,

children who spent more than 20 minutes a day in a forest area were almost five times more active physically than children who did not move about in green areas daily (Almanza et al. 2012). In an Australian cohort study (Cleland et al. 2008), each hour spent outdoors increased the total physical activity by 27 minutes a week. The probability of being overweight was 27–41 percent lower for children who spent more time outdoors (Cleland et al. 2008).

There is reason to consider whether attention should be paid to the needs of child visitors at various nature sites and other green environments. The nature activities of children could be better supported by providing up-to-date information and by improving the supply of nature activity services targeted at families with children, including guidance, equipment rental and events. Investments in nature activities are a cost-effective and equality advancing means of promoting the well-being of children and youths, which should be taken into account, for example, when making investments in sports facilities.

The research data showed some differences between rural and urban schools. The possibilities for physical activity differ between rural and urban areas; the opportunities for guided exercise in rural areas is more limited than in urban areas. In the data, this may have been reflected in the more active engagement in club activities in urban schools. In rural areas, new opportunities for physical activities could be provided by developing the services of self-initiated nature activities while taking into account the preferred forms of activity of children and youths. The same naturally applies to urban areas, as the data do not indicate that saw dust tracks are the preferred outdoor areas for children.

The intervention increased the children's motivation to engage in outdoor activity in nature. Engaging in nature activities is not only dependent on the children's motivation or preparedness for change, however. A significant observation of the study was that lack of time was found to prevent partaking in nature activities. A significant proportion of the children said that they "liked to move

about in nature but did so fairly rarely” and justified their answer with lack of time.

The lack of time largely refers to the prioritisation of time use. The daily lives of children are spent on school assignments, organised hobbies and screen time dedicated to social media, games and programmes, and for some also on household chores. In relation to these forms of time use, engaging in nature activities was seen as an important counterbalance but also as something that occupied a position as the underdog in relation to screen time. The observation on the lack of time raises ideas about how adults guide children’s time use and the kind of entertainment that is prioritised in society.

The research results provide arguments for increasing nature activities during school hours. Almost half of those involved in the intervention felt that the amount of nature activities at school was too low. The nature activity days were found to have beneficial effects on the well-being of school children both during the events and afterwards in their daily lives. In the children’s worlds of experience, being together with classmates and the impact on classroom spirit and social relationships were of particularly great significance during nature activity days. The school reaches all children and is present in much of their daily lives. Even internationally, schools play an important role in familiarising children and youths with nature activities (Lovelock et al. 2016, p. 444). The social, psychological and physical well-being during school days has far-reaching effects, for example in how learning and success at school impact the working life in adulthood.

The attempt to increase the engagement in nature activities among families would be justified in terms of the well-being of families. Studies have shown that both children and adults feel that not enough time is spent together with the family – one of the most important factors behind the well-being of children and youths. According to the school health survey, more than a third of fourth and fifth graders would like to spend more time together with the family (Terveyden ja hyvinvoinnin laitos 2018). Also 40 percent of parents would like to spend more time

with the family. The central objective of the Government’s national child strategy work is to increase the time that families spend together (Lapsistrategian työryhmä 2019). Engaging in nature activities offers time for interaction and encounters. It may also provide physical activity that is more substantial and varied than that offered by guided physical activities. Parents have been found to feel that nature activities offer children stimulating activities that are good for development (Kaikkonen et al. 2014, p. 27). For the children examined in this study, outdoor activity in nature also provided an important counterweight to the performance-oriented everyday life.

The Western countries value the use of time and money for organised hobbies. The material also suggests that families may consider participation in organised hobbies because it is easier than engaging in nature activities. It might be necessary to consider the values related to the time use of families. Do hobbies provide an opportunity to spend time with the family or does taking the children to their hobbies after school and working hours rob families of the time they could spend together? Nature activities that the child considers enjoyable are likely to be that for the whole family. If outdoor activities in nature can be made both easier to engage in and more appreciated, it can have a manifold impact on well-being.

7.2 Limitations of the study and reliability

Firstly, the transferability of the results is supported by the targeting of the intervention to four entire school classes. The selection in the sample was based on the willingness of the teachers of the classes to participate in the intervention. There was no selection in terms of students in the classes. All students in the classes participated in both the activities and the surveys, and any absences were not due to selections. Transferability is also supported by the fact that the children’s engagement in physical activities nearly matched the national averages. Geographically, the target group is rather narrow, but their living environments vary in terms of community structure from a

large city to a rural sparsely populated area. However, the sample of the study is not sufficient for the purposes of statistical generalisation. A control trial design would improve the reliability of the study. In this study, the intervention groups had no control groups.

The generalisability of the results to Finnish children on average is weakened by the fact that one of the four school classes of the project represented a group that on average was more multicultural and better off socio-economically. The participation of this class can be seen as a merit from the perspective that information about groups with diverse ethnic backgrounds is needed as multiculturalism in society increases. The class is well represented especially in the interview data. Of the eleven children interviewed, seven were in this class and five of them had a foreign background at least on the part of the other parent's country of birth.

In terms of the quality and reliability of the data and analysis, it is important to note that two different types of data were used. In the surveys, the children evaluated areas of experience that had been selected in advance from the intervention. The interviews complemented understanding of the kinds of things are relevant to the children themselves. In the interviews, the researcher also had their interpretations of some of the results of the survey checked by the children. This was important, for example, when reading the assessments of the activities on the survey forms; it was acknowledged that some of the respondents had negatively evaluated an element also in cases when they felt it was missing from the activity.

The quality of the data is also influenced by differences in how the children understood the concepts used. The differences in the Finnish language skills of the children had a slight impact on the survey data; the survey forms were in Finnish only, which resulted in some confusion. Furthermore, nature was not defined as a concept for the children and therefore the children's responses should be considered to relate to all the places they personally felt to be nature (see chapter 4.2). The ability of children to describe their experiences is also limited. It should also be

noted that factors that were not studied, such as weather, equipment, previous experience and other individual factors, could have influenced the children's different experiences. In addition, in the qualitative analysis, an adult researcher has inevitably interpreted experiences from their own subjective perspective. The researcher's point of view has partly been shaped by experiences and contexts that differ from the ones in which the target group of the research lives.

7.3 Applicability of the results and need for further research

The main object of the study was the camp-school type activities of various school classes in nature. Firstly, the results provide information on the kinds of elements that are preferred and meaningful for children partaking in such activities. Based on the results concerning the nature activities, it is possible to develop nature activity services aimed primarily at children and youths as well as nature activities that school classes can engage in. According to the results, the most important issues to be taken into account in planning include a suitable division between adult-led teaching and self-initiated activities, the enabling of cooperation and communal experiences as well as challenges that enable positive experiences of physical activities by letting one to exceed one's own expectations (cf. Lyyra et al. 2019).

The results also have applicability value in the general promotion of outdoor activity in nature and in the acknowledgement of the needs and preferences related to the recreational use of nature. They increase our knowledge of the perceived impacts of nature activities and show how personal experiences of outdoor activities prevent alienation from nature. The results are indication of the things children appreciate and seek in nature, the manner in which nature activities form a part of their daily lives and the factors that restrict their self-organised physical activities in nature. The results suggest that it is important to allow and enable children's access to nature where they can move about in the ways and with the objectives they choose, come

in contact with plants and animals, or, for example, rest for a while. The fears associated with nature must also be taken into account.

The results can also be applied when examining the nature activities of children and their well-being effects, when planning methods and indicators and when interpreting results. The studies may take into account the elements and meanings that, based on this study, are preferred or meaningful to children and affect their well-being and their relationship with outdoor activities in nature.

The research has aimed to amplify the voice of children and youths. The worlds in which different generations live and the boundary conditions that the surrounding reality provides differ from each other, giving the experiences of different generations different meanings. An attempt should be made to understand the prerequisites for a good life and well-being from the point of view of the children. Growing in various physical, social and cultural environments lays the foundation for different experiences and meanings of nature and nature activities (cf.

Itkonen & Kauravaara 2015). Listening to children and youths is important when planning and organising their services and activities or the preconditions for self-initiated activities.

In view of the above, it is appropriate to examine how the socio-economic status of children affects their engagement in nature activities and to bring attention to possible inequalities. Similarly, research could highlight how natural environments and nature activities can help in the attempt to reduce socio-economic differences. Children and young people in a disadvantaged position may find it more difficult to have access to nature during their free time. Epidemiological studies have already provided evidence that, if the access of vulnerable population groups to nature is good, the impact of nature on well-being is relatively higher than in population groups which are better off (Mitchell 2018). It has also been observed in previous studies that young people can experience nature as a place that, compared to sports venues, is more open and permissive for all types of people (Hasanen 2017). Similarly, the impact of



Fifth graders enjoyed the wintry nature and landscape of the Folk Park of Saari. Photo: Lassi Puhtimäki.

community structures on nature experiences, nature relationships and possible alienation from nature should also be examined (see Simula 2012, p. 194).

There were no children with disabilities among those involved in the intervention. Promoting equal nature activity services, accessibility and availability of nature requires consultation of this target group. It would be appropriate to focus the research on the experiences of a group that represents a range of functional capacities. A project on accessible nature tourism (Lahti University of Applied Sciences 2019) is currently underway in the intervention area, and accessible physical activities in nature have been developed in a multidisciplinary network in the development projects *Polku luontoon* (Path to Nature; Mansikkaviita 2019) and *Rohkeasti luontoon* (Mansikkaviita 2016). In order to complement these, it would be useful to further examine the preconditions and meanings of physical activities of children and youths in need of exercise.

Equality is also linked to the increasing multiculturalism of society. It would be topical to discuss children with different ethnic backgrounds and their nature activities more closely. Based on the observations made in this study, for example, the concept of nature and fear of nature may be different depending on the children's cultural background and thus form a different background for experiences and meanings.

The research also showed the need to focus on how the attachment of young generations to technology is connected to nature activities. According to the results, nature is on the one hand a significant counterbalance to screen time and, on the other hand, it occupies a position as the underdog in relation to screen time. Interesting research topics could include experiences of the significance of technology for nature activities and for nature activity services. It would be important to scrutinise the experiences and meanings of those children who did not find nature activities meaningfully inspiring during the intervention. Some of them may be children who enjoy the worlds of social media, computers and console games, and whose premise for finding meaning in nature activities may be unpredictable. As nature is a good environment for unstructured activities, studies should also focus on how to support the agency of children and youths who come from different backgrounds and how to utilise that agency to promote a closer connection to nature.

References

- Aira, T., Kannas, L., Tynjälä, J., Villberg, J. & Kokko, S. 2013: Hiipuva liikunta nuoruusiässä. Drop off -ilmiön aikatrendejä ja kansainvälistä vertailua WHO-Koululaistutkimuksen (HBSC-Study) aineistoilla 1986–2010. – Jyväskylän yliopisto. Terveystieteiden tutkimuskeskuksen julkaisuja 5. <jyx.jyu.fi/handle/123456789/41670>. 95 p.
- Aitken, S. C. 2001: Geographies of young people. The morally contested spaces of identity. – Routledge, London. 212 p.
- Almanza, E., Jerret, M., Dunton, G., Seto, E. & Pentz, M. A. 2012: A study of community design, greenness, and physical activity in children using satellite, GPS and accelerometer data. – *Health & Place* 18:46–54.
- Amoly, E., Dadvand, P., Forms, J., Lopez-Vicente, M., Basagana, X. & Sunyer, J. 2014: Green and blue spaces and behavioral development in Barcelona Schoolchildren: The BREATHE project. – *Environmental Health Perspectives* 122(12): 1351–1358.
- Blomqvist, M., Mononen, K., Koski, P. & Kokko, S. 2019: Urheilu ja seuraharrastaminen. – In: Kokko, S. & Martin, L. (eds.), Lasten ja nuorten liikuntakäyttäytyminen Suomessa. LIITU-tutkimuksen tuloksia 2018. Valtion liikuntaneuvoston julkaisuja 2019: 1. <www.liikuntaneuvosto.fi/files/634/VLN_LIITU-raportti_web_final_30.1.2019.pdf>. P. 49–55.
- Bragg, R., Wood, L., Barton, J. & Pretty, J. 2013: Measuring connection to nature in children aged 8-12. A robust method for the RSPB. – University of Essex. 64 p.
- Broberg, A. 2015: They'll never walk alone? The multiple settings of children's active transportation and independent mobility. – Aalto University publication series Doctoral Dissertations 94/2015 <aaltodoc.aalto.fi/bitstream/handle/123456789/17246/isbn9789526062853.pdf?sequence=1&isAllowed=y>. 53 p.
- Calogiuri G. 2016: Natural environments and childhood experiences promoting physical activity, examining the mediational effects of feelings about nature and social networks. – *International Journal of Environmental Research and Public Health* 13; 439. doi:10.3390/ijerph13040439.
- Capaldi, C. A., Dopko, R. L. & Zelenski, J. M. 2014: The relationship between nature connectedness and happiness: a meta-analysis. – *Frontiers in Psychology* 5:976. doi: 10.3389/fpsyg.2014.00976
- Cheng, J. & Monroe, M. 2012: Connection to nature: Children's affective attitude toward Nature. – *Environment and Behavior* 44(1): 31–49. DOI: 10.1177/0013916510385082.
- Cleland, V., Crawford, D., Baur, L. A., Hume, C., Timperio, A. & Salmon, J. 2008: A prospective examination of children's time spent outdoors, objectively measured physical activity and overweight. – *International Journal of Obesity* 32: 1685–1693.
- Deci, E. L. & Ryan, R. M. 2008: Self-determination theory: A macrotheory of human motivation, development, and health. – *Canadian Psychology/Psychologie Canadienne*, 49(3): 182–185. <http://dx.doi.org/10.1037/a0012801>.
- Department for Environment, Food & Rural Affairs 2017: Evidence statement on the links between natural environments and human health. – European Centre for Environment & Human Health. University of Exeter Medical School. 43 p.
- Diaz, S., Settele, J., Brondizio, E., Ngo, H.T., Agard, J. et al. 2019: Summary for policymakers of the global assessment report on biodiversity and ecosystem services – unedited advance version. Report summary. – <www.ymparisto.fi/download/noname/%7BF4138B40-AA79-4DAC-888F-F711DF7325B6%7D/146072>. 39 p.

- Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. 2013: A systematic review of the psychological and social benefits of participation in sport for children and adolescents: Informing development of a conceptual model of health through sport. – *International Journal of Behavioral Nutrition and Physical Activity* 10:98. doi: 10.1186/1479-5868-10-98.
- Engemann, K., Pedersen, C. B., Arge, L., Tsirogiannis, C., Mortensen, P. B. & Svaning, J. C. 2019: Residential green space in childhood is associated with lower risk of psychiatric disorders from adolescence into adulthood. – *Proceedings of the National Academy of Sciences of the United States of America* 116(11): 5188–5193. doi: 10.1073/pnas.1807504116.
- Gascon, M., Zijlema, W., Vert, C., White, M. P. & Nieuwenhuijsen, M. J. 2017: Outdoor blue spaces, human health and well-being: A systematic review of quantitative studies. – *International Journal of Hygiene and Environmental Health* 220(8): 1207–1221. <https://doi.org/10.1016/j.ijheh.2017.08.004>
- Gissler, M. & Seppänen, J. 2017: Nuorten mielenterveysongelmat lisääntyvät Pohjoismaissa – Erityisryhmänä maahanmuuttajat. – Blog entry, Terveiden ja hyvinvoinnin laitos. <blogi.thl.fi/nuorten-mielenterveysongelmat-lisaantyyvat-pohjoismaissa-erityisryhmana-maahanmuuttajat>.
- Gundersen, V., Skår, M., O'Brien, L., Wold, L. C. & Follo, G. 2016: Children and nearby nature: A nationwide parental survey from Norway. – *Urban Forestry & Urban Greening* 17: 116–125.
- Hakanen, T., Myllyniemi, S. & Salasuo, M. 2019: Oikeus liikkua. Lasten ja nuorten vapaa-aikatutkimus 2018. – In: Hakanen, T., Myllyniemi, S. & Salasuo, M. (eds), Oikeus liikkua. Lasten ja nuorten vapaa-aikatutkimus 2018. Opetus- ja kulttuuriministeriö, Valtion liikuntaneuvosto, Valtion nuorisoneuvosto, Nuorisotutkimusverkosto. <tietoanuorista.fi/wp-content/uploads/2019/02/Lasten-ja-nuorten-vapaa-aikatutkimus-Oikeus-liikkua-Verkkajulkaisu.pdf>. P. 9–80.
- Hartig, T., Mitchell, R., de Vries, S. & Frumkin, H. 2014: Nature and health. – *Annual review of public health* 35: 207–228.
- Hasanen, E. 2017: “Me ollaan koko ajan liikkeessä” – Tutkimus nuorten omaehtoisen liikkumisen muodoista ja merkityksistä tilan kehyksissä. – *Studies in Sport, Physical Education and Health* 261. Jyväskylän yliopisto, Jyväskylä. <urn.fi/URN:ISBN:978-951-39-7204-2>.
- Hoare, E., Milton, K., Foster, C. & Allender, S. 2016: The associations between sedentary behavior and mental health among adolescents: A systematic review. – *International Journal of Behavioral Nutrition and Physical Activity*. Oct 8; 13(1): 108. DOI:10.1186/s12966-016-0432-4.
- Husu, P., Jussila, A.-M., Tokola, K., Vähä-Ypyä, H. & Vasankari, T. 2019: Objektiivisesti mitatun liikkumisen, paikallaanolon ja unen määrä. – In: Kokko, S. & Martin, L. (eds.), Lasten ja nuorten liikuntakäyttäytymisen Suomessa. LIITU-tutkimuksen tuloksia 2018. Valtion liikuntaneuvoston julkaisuja 2019: 1. <www.liikuntaneuvosto.fi/files/634/VLN_LIITU-raportti_web_final_30.1.2019.pdf>. P. 29–40.
- Hynynen S.-T. & Hankonen, N. 2015: Autonomiaa tukien aktiivisemmaksi? Itsemääräämisen teoria lasten ja nuorten liikunnan tukemiseksi. – *Kasvatus* (5): 473–485.
- IPCC (Intergovernmental panel on climate change) 2018. Special report: Global Warming of 1.5 c degrees. Summary for policy makers. – <www.ipcc.ch/sr15/chapter/summary-for-policy-makers>.
- Itkonen, H. 1998: Majan rakentajia ja kukkulan kuninkaita – Matkoja lapsuuden tilaan. – In: Houni, P. & Suurpää, L., Kuvassa nuoret. Tampere University Press, Tampere. P. 49–61.
- Itkonen, H. & Kauravaara, K. 2015: Kurrottuja kulttuurikuiluja. – In: Itkonen, H. & Kauravaara, K. (eds), Liikunta kansalaisten elämäkulussa. Tulkintoja liikkumisesta ja liikunnanedistämisestä. Liikunnan ja kansanterveyden julkaisuja 296. LIKES, Jyväskylä. P. 184–189.

- Kaikkonen, H., Virkkunen, V., Kajala, L., Erkkonen, J., Aarnio, M. & Korpelainen, R. 2014: Terveystä ja hyvinvointia kansallispuistoista – Tutkimus kävijöiden kokemuksta vaikutuksista. – Metsähallitus Nature Conservation Publications. Series A 208. <julkaisut.metsa.fi/julkaisut/show/1746>. 65 p.
- Kaivola, T. & Rikkinen, H. 2003: Nuoret ympäristöissään. Lasten ja nuorten kokemusmaailma ja ympäristömielikuvat. Nuorisotutkimusverkoston/Nuorisotutkimusseuran julkaisuja 36. Tietolipas 199. – Suomalaisen Kirjallisuuden Seura, Helsinki. 307 p.
- Kallio, K. P. 2010: Missä lapsuus tapahtuu? – In: Kallio, K. P., Ritala-Koskinen, A. & Rutanen, N. (eds), Missä lapsuutta tehdään? Nuorisotutkimusverkoston/Nuorisotutkimusseuran julkaisuja 105. Helsinki. P. 215–227.
- Kallio, J., Hakonen, H. & Tammelin, T. 2019: Koulumatkaliikunta. – In: Kokko, S. & Martin, L. (eds.), Lasten ja nuorten liikuntakäyttäytyminen Suomessa. LIITU-tutkimuksen tuloksia 2018. Valtion liikuntaneuvoston julkaisuja 2019: 1. <www.liikuntaneuvosto.fi/files/634/VLN_LIITU-raportti_web_final_30.1.2019.pdf>. P. 98–100.
- Kangas, M., Vuojärvi, H. & Siklander, P. 2018: Hiking in the wilderness: Interplay between teachers' and students' agencies in outdoor learning. – *Education in the North* 25(3): 7–31.
- Kangasniemi, J., Reitti, M. & Sillanpää-Reitti, T. 2009: Luonto- ja elämysliikunta. – Koululiikuntaliitto KLL ry. <www.kll.fi/filebank/61-koululiik_luontoliikunta_net-ti.pdf>. 32 p.
- Kokko, S., Martin, L., Villberg, J., Ng, K. & Mehtälä, A. 2019: Itsearvioitu liikunta-aktiivisuus, ruutuaika ja sosiaalinen media sekä liikkumisen seurantalaitteet ja -sovellukset. – In: Kokko, S. & Martin, L. (eds.), Lasten ja nuorten liikuntakäyttäytyminen Suomessa. LIITU-tutkimuksen tuloksia 2018. Valtion liikuntaneuvoston julkaisuja 2019: 1. <www.liikuntaneuvosto.fi/files/634/VLN_LIITU-raportti_web_final_30.1.2019.pdf>. P. 17–25.
- Korpela, K. & Paronen, O. 2011: Ulkoilun hyvinvointivaikutukset. – In: Sievänen, T. & Neuvonen, M. (eds), Luonnon virkistyskäyttö 2010. Metlan työraportteja 212. <www.metla.fi/julkaisut/workingpapers/2011/mwp212.htm>.
- Koski, P. 2004: Liikuntasuhde – Liikunnan kohtaaminen kulttuurisesti rakentuvana sosiaalisen maailmana. – In: Ilmanen, K. (ed.), Pelit ja kentät – Kirjoituksia liikunnasta ja urheilusta. Jyväskylän yliopiston liikunnan sosiaalitieteiden laitos, Jyväskylä. P. 189–208.
- Koski, P. 2009: Liikunnan merkityksellistämiseen? – *Liikunta & Tiede* 46(2–3): 2.
- Koski, P. & Hirvensalo, M. 2019: Liikunnan merkitykset ja esteet. – In: Kokko, S. & Martin, L. (eds), Lasten ja nuorten liikuntakäyttäytyminen Suomessa. LIITU-tutkimuksen tuloksia 2018. Valtion liikuntaneuvoston julkaisuja 2019: 1. <www.liikuntaneuvosto.fi/files/634/VLN_LIITU-raportti_web_final_30.1.2019.pdf>. P. 67–74.
- Lahti University of Applied Sciences 2019: Luonto kaikille -project. – <www.lamk.fi/fi/hanke/LUKA>, accessed 29 May 2019.
- Lapsistrategian työryhmä 2019: Lapsen aika – Kohti kansallista lapsistrategiaa 2040. – Valtioneuvoston julkaisuja 2019:4. <urn.fi/URN:ISBN:978-952-287-698-0>. 96 p.
- Lasten ja nuorten liikunnan asiantuntijaryhmä 2008: Fyysisen aktiivisuuden suositus kouluikäisille 7–18-vuotiaille. – Opetusministeriö ja Nuori Suomi ry, Helsinki. 96 p.
- LIKES-tutkimuskeskus 2018: Tulokortti 2018: Lasten ja nuorten liikunta 2018. Liikunnan ja kansanterveyden julkaisuja 345. <www.likes.fi/filebank/2776-tulokortti2018_FI_PDF_150.pdf>. 30 p.
- Louy, R. 2010: Last child in the woods. Saving our children from nature-deficit disorder. – Atlantic Books, USA. 400 p.
- Lovelock, B., Walters, T., Jellum, C. & Thompson-Carr, A. 2016: The participation of children, adolescents, and young adults in nature-based recreation. – *Leisure Sciences* 38(5): 441–460. DOI: 10.1080/01490400.2016.1151388.

- Lyyra, N., Heikinaro-Johansson, P. & Palomäki, S. 2019: Lasten ja nuorten kokemuk- sia liikunnanopetuksesta. – In: Kokko, S. & Martin, L. (eds), Lasten ja nuorten lii- kuntakäyttäytyminen Suomessa. LIITU- tutkimuksen tuloksia 2018. Valtion liikun- taneuvoston julkaisuja 2019: 1. <www. liikuntaneuvosto.fi/files/634/VLN_LIITU- raportti_web_final_30.1.2019.pdf>. P. 89– 93.
- Mansikkaviita, R. 2016: Rohkeasti luontoon – Näkökulmia yhdenvertaisen luontoliikun- nan edistämiseen. – Metsähallitus, Vantaa. <julkaisut.metsa.fi/julkaisut/show/2063>. 33 p.
- Mansikkaviita, R. 2019: Polku luontoon – Näkökulmia yhdenvertaisen luontoliikun- nan edistämiseen. Luontoliikkujan poluilla. – Metsähallitus, Vantaa. <julkaisut.metsa.fi/ julkaisut/show/2369>. 44 p.
- Martin, L., Suomi, K. & Kokko, S. 2019: Liikuntatilaisuudet. – In: Kokko, S. & Martin, L. (eds), Lasten ja nuorten liikuntakäyttä- tyminen Suomessa. LIITU-tutkimuksen tuloksia 2018. Valtion liikuntaneuvoston julkaisuja 2019: 1. <www.liikuntaneuvos- to.fi/files/634/VLN_LIITU-raportti_web_fi- nal_30.1.2019.pdf>. P. 43–46.
- Marttila, M. 2016: Elämys- ja seikkailupedago- ginen luontoliikunta opetussuunnitelman toteutuksessa. Etnografinen tutkimus. – Studies in Sport, Physical Education and Health 237. Jyväskylän yliopisto, Jyväskylä. <urn.fi/URN:ISBN:978-951-39-6623-2>. 261 p.
- Miles, M. B., Huberman, M. & Saldaña, J. 2014: Qualitative data analysis: A methods sour- cebook. Third Edition. – Sage, Thousand Oaks, CA. 408 p.
- Mitchell, R. 2018: Vulnerable populations, health inequalities, and nature. – In: Van den Bosch, M. & Bird, W. (toim.), Oxford tex- tbook of Nature and Public Health. The ro- le of nature in improving the health of po- pulation. Oxford University Press. Pp. 182– 187.
- Mustapa, N. D., Maliki, N. F. & Hamzah, A. 2015: Repositioning children’s developmental needs in space planning: A review of con- nection to nature. – Procedia – Social and Behavioral Sciences 170: 330–339. <doi. org/10.1016/j.sbspro.2015.01.043>.
- Mäki, P., Lehtinen-Jacks, S., Vuorela, N., Levälahti, E., Koskela, T., Saari, A., Mölläri, K., Mahkonen, R., Salo, J. & Laatikainen, T. 2018: Tilastotietoa lasten ylipainoisuuden yleisyydestä saatavilla yhä useammasta kunnasta. – Suomen Lääkärilehti 73(41): 2336–2342. <www.laakarilehti.fi/tietees- sa/alkuperaistutkimukset/tilastotietoa-las- ten-ylipainoisuuden-yleisyydesta-saatavil- la-yha-useammasta-kunnasta>.
- Mäkinen, K. & Tyrväinen, L. 2008: Teenage ex- periences of public green spaces in subur- ban Helsinki. – Urban Forestry & Urban Greening 7(4): 277–289.
- Orben, A. & Przybylski, A. 2019: Screens, teens, and psychological well-being: evi- dence from three time-use-diary stu- dies. – Psychological Science 30(5): 682–696. <journals.sagepub.com/doi/ 10.1177/0956797619830329>.
- Owen, K. B., Smith J., Lubans, D. R., Ng, J. Y. Y. & Lonsdale C. 2014: Self-determined motiva- tion and physical activity in children and adolescents: A systematic review and meta- analysis. – Preventive Medicine 67: 270– 279. <doi: 10.1016/j.ypmed.2014.07.033>.
- Parliamentary Office of Science and Technology 2016: POSTnote 538 October Green Space and Health. Houses of Parliament. – <researchbriefings.parlia- ment.uk/ResearchBriefing/Summary/POST- PN-0538#fullreport>. 5 s.
- Pasanen, T. & Korpela, K. 2015: Luonto liikut- ta ja elvyttää. – Liikunta & Tiede 52(4): 4–9.
- Paukkeri, K. 2014: Näkymiä lapsen luontosuh- teeseen ja luonnon hyvinvointivaikutuk- siin. Kasvatustieteen pro gradu -tutkielma. Oulun yliopisto.
- Prochaska, J. O. & DiClemente, C. C. 1983: Stages and processes of self-change of smoking: Toward an integrative model of change. – Journal of Consulting and Clinical Psychology 51(3): 390–395. <dx. doi.org/10.1037/0022-006X.51.3.390>.

- Sharp, E. H., Tucker, C. J., Baril, M. E., Van Gundy, K. T. & Rebellon, C. J. 2015: Breadth of participation in organized and unstructured leisure activities over time and rural adolescents' functioning. – *Journal of Youth and Adolescence*. 44(1): 62–76. <doi: 10.1007/s10964-014-0153-4>.
- Sievänen, T. & Neuvonen, M. 2011: Luonnon virkistyskäytön kysyntä 2010 ja kysynnän muutos. – In: Sievänen, T. & Neuvonen, M. (eds), *Luonnon virkistyskäyttö 2010*. Metlan työraportteja 212. P. 37–78. <www.metla.fi/julkaisut/workingpapers/2011/mwp212.pdf>.
- Simula, M. 2012: Luonnossa liikkumisen kulttuuriset representaatiot – Diskurssianalyysi suomalaisten luonnossa liikkumista käsittelevistä haastatteluista. – *Studies in Sport, Physical Education and Health* 182. Jyväskylän yliopisto, Jyväskylä. 227 p.
- Skår, M., Gundersen, V. & O'Brien, L. 2016: How to engage children with nature: Why not just let them play? – *Children's Geographies* 14(5): 527–540. <DOI: 10.1080/14733285.2015.1136734>.
- Soini, T. 2011: Treenimatkoja kuljetusyhteiskunnassa – Kilpaurheiluvan lapsen vanhemmuus. – Master's thesis, University of Jyväskylä, Social Sciences of Sport. 144 p.
- Tampereen kaupunki 2019: Tampereen kansainvälinen koulu (FISTA). – Tampere.fi / Varhaiskasvatus ja koulutus / Esiopetus ja perusopetus / Koulut. <www.tampere.fi/varhaiskasvatus-ja-koulutus/esiopetus-ja-perusopetus/koulut/tampereen-kansainvalinen-koulu.html>, accessed 29.1.2019.
- Telama, R. 1992: Luontoliikunnan motivaatio. Luonto liikunnan harrastajan havainto-, elämys- ja kokemusmaailmana. – In: Lyytinen, T. & Vuolle, P. (eds), *Ihminen – luonto – liikunta. Liikunnan ja kansanterveyden julkaisuja 81*. Liikunnan ja kansanterveyden edistämissäätiö LIKES, Jyväskylä. P. 61–77.
- Terveiden ja hyvinvoinnin laitos 2018: Kouluterveyskysely 2018. – Terveiden ja hyvinvoinnin laitos. – <thl.fi/kouluterveyskysely/tulokset>, accessed 22.4.2019.
- Vanaken, G. J. & Danckaerts, M. 2018: Impact of green space exposure on children's and adolescents' mental health; a systematic review. – *International Journal of Environmental Research and Public Health* 15(12), pii: E2668. <doi: 10.3390/ijerph15122668>.
- Vähäsarja, K. 2015: Luonto liikuttamaan – ESR-hankkeen 2013–2015 loppuraportti. – Metsähallitus, Vantaa. <julkaisut.metsa.fi/julkaisut/show/1993>. 39 p.
- WHO 2017: Urban green space interventions and health. A review of impacts and effectiveness. – World Health Organization Regional Office for Europe. <www.euro.who.int/__data/assets/pdf_file/0010/337690/FULL-REPORT-for-LLP.pdf>. 203 p.

Acknowledgements

The research has been carried out through cooperation between several parties. Of the authors of the research report, Kati Vähäsarja was responsible for planning the intervention and data collection of the Moved by Nature project and participated in writing the manuscript. Elina Hasanen was responsible for defining the research task, collecting material, analysing the data and writing the research report. The study included Päivi Pälvimäki, Minna Jokinen and Johanna Ahtiainen, who were involved in the intervention planning, realisation and data collection of the Moved by Nature project. Our thanks go to the students and teachers who took part in the intervention from the Riihivalkama School, the Tammela School Centre, the Finnish

International School of Tampere and Vuoniitty Comprehensive School. We would also like to thank the steering group of the Moved by Nature project, the parents of the children and parties involved in the realisation of the interventions: Eerikkilä Sport & Outdoor Resort, Erärenki, Jokioinen Museum Railway Association, Kulttuuriyhdistys Kuvio, Loimunalle, Parks and Wildlife Finland, Outdoor 4U OSK, Vekkilän Museotila and Wilderness Tales. The intervention and research were funded by the European Regional Development Fund (ERDF), the Regional Council of Uusimaa (administered by the Häme Federation), Metsähallitus and Eerikkilä Sport & Outdoor Resort, as well as the municipalities of Forssa, Humppila, Jokioinen, Tammela and Ypäjä.

Spring survey

SURVEY FOR THE PILOT GROUPS OF THE MOVED BY NATURE PROJECT

Thank you for participating in our nature days with your class at Tammela! You and your group represent some of our most valuable experts! Your thoughts and experiences are important to us because we want to offer you nature activities that bring you joy and promote your well-being.

BACKGROUND QUESTIONS

I am a girl boy

First name Surname _____

School _____

1. Physical activities during the school days

a) Do you like PE (physical education) classes? Circle the most appropriate option

Always! Usually Sometimes Rarely Never

b) What is your favourite thing to do during break time? Name three things.

2. How long is your way to school?

0–1.0 km

1.1–3.0 km

3.1–5.0 km

5.1–10.0 km

10.1–20.0 km

over 20 km

3. How do you usually get to school? Select your most common means of transport for spring/autumn and for winter.

Spring

Autumn

Winter

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | On foot |
| <input type="checkbox"/> | <input type="checkbox"/> | By bike |
| <input type="checkbox"/> | <input type="checkbox"/> | Getting a lift from parents |
| <input type="checkbox"/> | <input type="checkbox"/> | School transport |
| <input type="checkbox"/> | <input type="checkbox"/> | Some other motor vehicle (bus, tram, metro) |

4. What is your favourite thing to do after school? Name three of your favourite pastimes or hobbies



5. Think about the last 7 days. Please indicate on how many days you have been doing physical activities for at least 60 minutes a day. (at home, at school or on your way to school so that you got out of breath)

E.g. walking fast, running, rollerblading, cycling, dancing, skateboarding, swimming, cross-country or downhill skiing, playing football, basketball or baseball.

- 0 days 1 2 3
 4 5 6 7 days

6. How much physical exercise do normally get in a week in total?

- Not at all approx. 1.5 hours a week approx. an hour a week
 2–3 hours a week 4–6 hours a week at least 7 hours

7. Do you do sports in a sports club?

- Yes I do, regularly and actively
 Yes, every now and then
 I don't at the moment but I have done in the past
 I don't and I have never done

8. What role has nature played in your life? Select the most appropriate option.

- I often move about in nature because being in nature is so much fun
 I like to move about in nature, but do so fairly rarely because

I don't really care for moving about in nature

I don't like moving about in nature at all

9. Which things do you particularly enjoy when it comes to being and moving about in nature?

10. In your opinion, how much do you move about in nature (forests, parks, gardens) during school days?

- All too much
 A bit too much
 Just the right amount
 Maybe a bit too little
 All too little



Vipuvoimaa
EU:lta
2014–2020



11. How important are the following outdoor recreational areas to you?

	Not important	Not very important	Fairly important	Very important	Cannot say
a) My or my friend's home garden	1	2	3	4	5
b) Cycleways and streets	1	2	3	4	5
c) Playgrounds and the schoolyard	1	2	3	4	5
d) Sports field	1	2	3	4	5
e) Nearby nature and forest	1	2	3	4	5
f) Sawdust tracks and outdoor routes	1	2	3	4	5
g) Nature at the summer cottage or at relatives'	1	2	3	4	5
h) Lakes, the sea and rivers	1	2	3	4	5
i) Wilderness	1	2	3	4	5
j) Other area, please specify.	1	2	3	4	5

12. How important do you find the following things related to your own life?

	Not important at all	Not very important	Fairly important	Very important	Cannot say
Your own appearance	1	2	3	4	5
Your own health	1	2	3	4	5
Your own physical condition	1	2	3	4	5
Success at school	1	2	3	4	5
Wealth	1	2	3	4	5
Relationship with your family members and relatives	1	2	3	4	5
Relationship with your friends	1	2	3	4	5
Hobby opportunities	1	2	3	4	5
Success in hobbies	1	2	3	4	5
Opportunity for holiday travels	1	2	3	4	5
Being and moving about in nature	1	2	3	4	5
Free time with family and relatives	1	2	3	4	5
Free time with friends	1	2	3	4	5

MOVED BY NATURE DAYS AT TAMMELA

12. How did you experience the following things during the day or days? Select the most appropriate option for each item.

	Not fun!	Not very much fun	Quite fun	Ace!	Cannot say / didn't take part
Moving about in nature					
Walking along paths	1	2	3	4	5
Running along paths	1	2	3	4	5
Climbing rocks and trees	1	2	3	4	5
Swimming	1	2	3	4	5
Paddling	1	2	3	4	5
Sitting around in peace	1	2	3	4	5
Going on adventures in nature on your own	1	2	3	4	5
Other, please specify.	1	2	3	4	5
Forest mystery					
Task instructions	1	2	3	4	5
Tasks at check points	1	2	3	4	5
Competition	1	2	3	4	5
Thrills	1	2	3	4	5
Finding check points	1	2	3	4	5
Working as a group	1	2	3	4	5
Other, please specify.	1	2	3	4	5
Paddling and walking tour					
Instructions and guidance	1	2	3	4	5
Learning how to paddle	1	2	3	4	5
Walk to the lean-to	1	2	3	4	5
Learning campcraft	1	2	3	4	5
Eating a packed lunch	1	2	3	4	5
Braiding a bracelet	1	2	3	4	5
Spending time freely in nature	1	2	3	4	5
Other, please specify.	1	2	3	4	5
Games and playing at Eerikkilä					
Instructions and guidance	1	2	3	4	5
Games	1	2	3	4	5
Competing	1	2	3	4	5
Having fun	1	2	3	4	5
Learning a new game	1	2	3	4	5



Vipuvoimaa
EU:lta
2014-2020



EERIKKILÄ
BRINGING OUT THE BEST SINCE 1848



Playing together	1	2	3	4	5
Other, please specify.	1	2	3	4	5
Pump trolley trip					
Instructions and guidance	1	2	3	4	5
Riding the pump trolley	1	2	3	4	5
Thrills	1	2	3	4	5
Speed	1	2	3	4	5
Need for power and stamina	1	2	3	4	5
Co-operation	1	2	3	4	5
Other, please specify.	1	2	3	4	5

13. Did the nature day inspire you to move about in nature more than before?

Not at all A little Quite a lot A lot!

14. If you could choose, how would you move about and spend time in nature in your everyday life?

15. How would you like to move about nature or what kinds of things would you like try, for example, during the autumn and winter Moved by Nature days?

16. If you have any thoughts about moving around in nature, we would love to hear them – let us know what you have to say by writing it here.



Vipuvoimaa
EU:lta
2014–2020

Hämeen liitto
Regional Council of Häme



EERIKILÄ
BRINGING OUT THE BEST SINCE 1849



5. Think about the last 7 days. Please indicate on how many days you have been doing physical activities for at least 60 minutes a day. (at home, at school or on your way to school so that you got out of breath)

E.g. fast walking, running, rollerblading, cycling, dancing, skateboarding, swimming, downhill or cross-country skiing, playing football, basketball and baseball.

- 0 days 1 2 3
 4 5 6 7 days

6. How much physical exercise do you normally get in a week?

- Not at all approx. an hour a week approx. 1.5 hours a week
 2–3 hours a week 4–6 hours a week at least 7 hours

7. Do you do sports in a sports club?

- Yes I do, regularly and actively
 Yes, every now and then
 I don't at the moment but I have done in the past
 I don't and I have never done

8. What role has nature played in your life? Select the most appropriate option.

- I often move about in nature because being in nature is so much fun
 I like to move about in nature, but do so fairly rarely because

I don't really care for moving about in nature

I don't like moving about in nature at all

9. Which things do you particularly enjoy when it comes to being and moving about in nature?

10. In your opinion, how much do you move about in nature (forests, parks, gardens) during school days?

- All too much
 A bit too much
 Just the right amount
 Maybe a bit too little
 All too little



Vipuvoimaa
EU:lta
2014–2020

Hämeen liitto
Regional Council of Häme



METSÄHALLITUS

EERIKKILÄ
BRINGING OUT THE BEST SINCE 1849



FORSÅ



HUMPPILA



JOKIOINEN



TAMMELA



YPÄJÄ

11. How important are the following outdoor recreational areas to you?

	Not important	Not very important	Fairly important	Very important	Cannot say
a) My or my friend's home garden	1	2	3	4	5
b) Cycleways and streets	1	2	3	4	5
c) Playgrounds and the schoolyard	1	2	3	4	5
d) Sports field	1	2	3	4	5
e) Nearby nature and forest	1	2	3	4	5
f) Sawdust tracks and outdoor routes	1	2	3	4	5
g) Nature at the summer cottage or at relatives'	1	2	3	4	5
h) Lakes, the sea and rivers	1	2	3	4	5
i) Wilderness	1	2	3	4	5
j) Other area, please specify.	1	2	3	4	5

12. How important do you find the following things related to your own life?

	Not important at all	Not very important	Fairly important	Very important	Cannot say
Your own appearance	1	2	3	4	5
Your own health	1	2	3	4	5
Your own physical condition	1	2	3	4	5
Success at school	1	2	3	4	5
Wealth	1	2	3	4	5
Relationship with your family members and relatives	1	2	3	4	5
Relationship with your friends	1	2	3	4	5
Hobby opportunities	1	2	3	4	5
Success in hobbies	1	2	3	4	5
Opportunity for holiday travels	1	2	3	4	5
Being and moving about in nature	1	2	3	4	5
Free time with family and relatives	1	2	3	4	5
Free time with friends	1	2	3	4	5

MOVED BY NATURE DAYS AT THE HÄME NATURE CENTRE, EERIKKÄLÄ, KORTENIEMI HERITAGE FARM AND NATIONAL PARK

13. How did you experience the following things during the day or days? Select the most appropriate option for each item.

	Not fun!	Not very much fun	Quite fun	Ace!	Cannot say / didn't take part
Moving about in nature in general during the days					
Walking along paths	1	2	3	4	5
Running along paths	1	2	3	4	5
Climbing rocks and trees	1	2	3	4	5
Sitting around in peace	1	2	3	4	5
Going on adventures in nature on your own	1	2	3	4	5
Other, please specify.	1	2	3	4	5
Nature challenge, i.e. check points along the route from Eerikkälä to the Nature Centre					
Instructions at the check points	1	2	3	4	5
A. Picture orienteering	1	2	3	4	5
B. Using a map	1	2	3	4	5
C. Recognising plants	1	2	3	4	5
D. Navigating with a GPS device	1	2	3	4	5
E. Crossing the water obstacle on an SUP board	1	2	3	4	5
F. Searching for rock painting stones	1	2	3	4	5
G. Riding a fatbike on the track	1	2	3	4	5
H. Practising using a tinderbox to make fire	1	2	3	4	5
I. Computer task on the right of public access	1	2	3	4	5
Competition	1	2	3	4	5
Thrills	1	2	3	4	5
Finding check points	1	2	3	4	5
Working as a pair	1	2	3	4	5
Other, please specify.	1	2	3	4	5



Vipuvoimaa
EU:lta
2014-2020



EERIKKILÄ
BRINGING OUT THE BEST SINCE 1849



Hiking trip in the national park, approx. 5 km					
Hiking guidance	1	2	3	4	5
Walking distance	1	2	3	4	5
Walking speed	1	2	3	4	5
Attractiveness of the walking route	1	2	3	4	5
Learning new things about nature	1	2	3	4	5
Eating a packed lunch	1	2	3	4	5
Hiking together	1	2	3	4	5
Other, please specify.	1	2	3	4	5

Circus school, i.e. juggling at the nature centre					
Guidance on juggling	1	2	3	4	5
Equipment (balls, flower sticks)	1	2	3	4	5
Competing	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Need for agility and balancing	1	2	3	4	5
Juggling together	1	2	3	4	5
Other, please specify.	1	2	3	4	5

Activities with ponies at the Nature Centre					
Guidance on getting to know the ponies	1	2	3	4	5
Taking care of the pony	1	2	3	4	5
Getting to know the pony in the pen	1	2	3	4	5
Calmness during the pony visit	1	2	3	4	5
Learning new things about animals	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify.	1	2	3	4	5



Activities at the Korteniemi Heritage Farm					
Guidance at the farm	1	2	3	4	5
Introduction to the animals (chickens, sheep, cows)	1	2	3	4	5
Introduction to the buildings and farm work	1	2	3	4	5
Games and playing (walking on stilts, throwing tyres/boots, skipping rope, tug-of-war)	1	2	3	4	5
Learning new things about farm life	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify.	1	2	3	4	5

Camping					
Guidance on setting a camp	1	2	3	4	5
Setting up and dismantling a tent	1	2	3	4	5
Night in a tent	1	2	3	4	5
Cooking on an open fire	1	2	3	4	5
Eating by the campfire	1	2	3	4	5
Learning new things about camping	1	2	3	4	5
Swimming	1	2	3	4	5
Taking a sauna	1	2	3	4	5
Angling with a hook and line	1	2	3	4	5
Paddling	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify.	1	2	3	4	5

14. Did the nature days inspire you to move about in nature more than before?

- Not at all A little Quite a lot A lot!

15. If it were up to you, how would you move about and be in nature in your everyday life?

16. How would you like to move about in nature or what kinds of things would you like to try, for example, during the winter Moved by Nature days?

17. What things had you not tried before?

E.g. sleeping in a tent, taking care of a pony, making a fire, hiking in a national park.

18. If you have any thoughts about moving around in nature, we would love to hear them – let us know what you have to say by writing it here.

Winter survey

SURVEY FOR THE PILOT GROUPS OF THE MOVED BY NATURE PROJECT

Thank you for taking part in our nature days with your class at the Folk Park of Saari! You are our most valuable expert! Your thoughts and experiences are important to us because we want to offer you nature activities that bring you joy and promote your well-being.

BACKGROUND QUESTIONS

I am a girl boy

First name _____ Surname _____

School _____

1. Physical activity during school days

a) Do you like PE (physical education) classes? Circle the most appropriate option

Always! Usually Sometimes Rarely Never

b) What do you prefer to do at break time? Mention three things.

2. How long is your way to school?

0–1.0 km

1.1–3.0 km

3.1–5.0 km

5.1–10.0 km

10.1–20.0 km

over 20 km

3. How do you normally travel to school? Select the most common means of transport for spring/autumn and for winter.

Spring

and autumn

Winter

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | On foot |
| <input type="checkbox"/> | <input type="checkbox"/> | By bike |
| <input type="checkbox"/> | <input type="checkbox"/> | Getting a lift from parents |
| <input type="checkbox"/> | <input type="checkbox"/> | School transport |
| <input type="checkbox"/> | <input type="checkbox"/> | Some other motor vehicle (bus, tram, metro) |

4. What do you prefer to do after school? Name three of your favourite pastime activities or hobbies



Vipuvoimaa
EU:lta
2014–2020



EERIKILÄ
BRINGING OUT THE BEST SINCE 1843



5. Think about the last 7 days. Please indicate on how many days you have been doing physical activities for at least 60 minutes a day. (on your free time, at school, on your way to school)

E.g. fast walking, running, rollerblading, cycling, dancing, skateboarding, swimming, downhill or cross-country skiing, playing football, basketball and baseball.

- 0 days 1 2 3
 4 5 6 7 days

6. How much physical exercise do you normally get in a week?

- Not at all approx. ½ hours a week approx. an hour a week
 2–3 hours a week 4–6 hours a week at least 7 hours

7. Do you do sports in a sports club?

- Yes I do, regularly and actively
 Yes, every now and then
 I don't at the moment but I have done in the past
 I don't and I never have done

8. What role has nature played in your life? Select the most appropriate option.

- I often move about in nature because being in nature is so much fun.
 I like to move about in nature, but do so fairly rarely because _____

 I don't really care for moving about in nature.
 I don't like moving about in nature at all.

9. Which things do you particularly enjoy when it comes to being and moving about in nature?

10. Who do you most often move about in nature with? You can select multiple options.

- Alone
 With a friend or friends
 With mum or dad
 With sister or brother
 With a dog
 With a hobby group
 With the class on school days
 With someone else, who: _____
 I don't move about in nature at all.

11. Is your home close to nature?

Select the **most appropriate option**, and then write what kinds of places there are on the line.

Tell us about nature that's so close to you that you can easily get there by walking or cycling.

There's **a lot** of nature near my home. What type of nature:

There's **quite a lot** of nature near my home. What type of nature:

There's **only a little** nature near my home. What type of nature:

There's **no** nature near my home.

12. In your opinion, how much do you move about in nature (forests, parks, gardens) during school days?

- All too much
- A bit too much
- Just the right amount
- Maybe a bit too little
- All too little

13. How important are the following outdoor recreational areas to you?

	Not important	Not very important	Fairly important	Very important	Cannot say
a) My or my friend's home garden	1	2	3	4	5
b) Cycleways and streets	1	2	3	4	5
c) Playgrounds and the schoolyard	1	2	3	4	5
d) Sports field	1	2	3	4	5
e) Nearby nature and forest	1	2	3	4	5
f) Sawdust tracks and outdoor routes	1	2	3	4	5
g) Nature at the summer cottage or at relatives'	1	2	3	4	5
h) Lakes, the sea and rivers	1	2	3	4	5
i) Wilderness	1	2	3	4	5
j) Other area, please specify. _____	1	2	3	4	5



Vipuvoimaa
EU:lta
2014-2020

Hämeen liitto
Regional Council of Häme



EERIKKILÄ
BRINGING OUT THE BEST SINCE 1849



14. How important do you find the following things related to your own life?

	Not important at all	Not very important	Fairly important	Very important	Cannot say
Your own appearance	1	2	3	4	5
Your own health	1	2	3	4	5
Your own physical condition	1	2	3	4	5
Success at school	1	2	3	4	5
Wealth	1	2	3	4	5
Relationship with your family members and relatives	1	2	3	4	5
Relationship with your friends	1	2	3	4	5
Hobby opportunities	1	2	3	4	5
Success in hobbies	1	2	3	4	5
Opportunity for holiday travels	1	2	3	4	5
Being and moving about in nature	1	2	3	4	5
Free time with family and relatives	1	2	3	4	5
Free time with friends	1	2	3	4	5

15. Think about your ordinary school day. What do you think about the following issues related to your class?

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Cannot say
My classmates enjoy each other's company.	1	2	3	4	5
I find it easy to get along with my classmates.	1	2	3	4	5
I have friends in my class.	1	2	3	4	5
I have one or more good friends in my class.	1	2	3	4	5
My class has a good team spirit.	1	2	3	4	5

MOVED BY NATURE DAYS AT THE FOLK PARK OF SAARI AND CAISSANIEMI

16. How did you experience the following things during the day or days? Select the most appropriate option for each item.

	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Moving about in nature in general during the day					
Walking along paths	1	2	3	4	5
Running along paths	1	2	3	4	5
Climbing on snow, rocks or trees	1	2	3	4	5
Snowshoeing	1	2	3	4	5
Going on adventures in nature on your own	1	2	3	4	5
Sitting still in peace	1	2	3	4	5
Other, please specify. _____ _____	1	2	3	4	5
Being together during the day					
Team spirit in my class	1	2	3	4	5
Working together with my entire class	1	2	3	4	5
Working together with my best classmates	1	2	3	4	5
Working together with my teacher	1	2	3	4	5
Working together with the instructors	1	2	3	4	5
Other, please specify. _____ _____	1	2	3	4	5
Snowshoeing					
Instructions on how to use the shoes	1	2	3	4	5
Snowshoeing in the forest	1	2	3	4	5
Snowshoeing to the campfire	1	2	3	4	5
Having lunch	1	2	3	4	5
Snowshoeing to the lean-to	1	2	3	4	5



Vipuvoimaa
EU:lta
2014–2020

Hämeen liitto
Regional Council of Häme



EERIKKILÄ
BRINGING OUT THE BEST SINCE 1849



Having a snack	1	2	3	4	5
Snowshoeing to the camp centre	1	2	3	4	5
Snowshoeing speed	1	2	3	4	5
Trip length	1	2	3	4	5
Learning new things	1	2	3	4	5
Competition	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify.	1	2	3	4	5

	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Dragging sledges					
Instructions on how to use the sledge	1	2	3	4	5
Dragging the sledges	1	2	3	4	5
Learning new things	1	2	3	4	5
Competition	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify.	1	2	3	4	5

	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Capture the flag					
Explaining the rules of the game	1	2	3	4	5
Playing the game	1	2	3	4	5
Learning new things	1	2	3	4	5
Competition	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify.	1	2	3	4	5



Vipuvoimaa
EU:lta
2014–2020



EERIKILÄ
BRINGING OUT THE BEST SINCE 1849



	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Making a miniature log candle					
Guidance on sawing	1	2	3	4	5
Sawing	1	2	3	4	5
Learning new things	1	2	3	4	5
Competition	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify. _____	1	2	3	4	5

	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Having a moment to calm down in the forest					
Guidance on how to calm down	1	2	3	4	5
Calmness of the moment	1	2	3	4	5
Silence	1	2	3	4	5
Having fun	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify. _____	1	2	3	4	5

	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Building with snow					
Instructions for building with snow	1	2	3	4	5
Building with snow	1	2	3	4	5
Learning new things	1	2	3	4	5
Competition	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify. _____	1	2	3	4	5



Vipuvoimaa
EU:lta
2014–2020



EERIKKILÄ
BRINGING OUT THE BEST SINCE 1849



	Not fun!	Not very much fun	Quite fun	Ace!	Didn't attend / I didn't participate / Cannot say
Winter swimming					
Instructions on how to go ice swimming	1	2	3	4	5
Taking a dip in cold water	1	2	3	4	5
Rolling in the snow	1	2	3	4	5
Taking a sauna	1	2	3	4	5
Having dinner	1	2	3	4	5
Learning new things	1	2	3	4	5
Competition	1	2	3	4	5
Having fun	1	2	3	4	5
Thrills	1	2	3	4	5
Working together	1	2	3	4	5
Other, please specify. _____ _____	1	2	3	4	5

17. What things had you not tried before the February nature day?

18. Did the nature day inspire you to move about in nature more than before?

Not at all A little Quite a lot A lot!

b) You can tell us why here: _____

19. What new thoughts have all the nature days given you on moving about in nature?



20. If it were up to you, how would you move about and be in nature in your everyday life?

21. If you have any thoughts about moving around in nature, we would love to hear them – let us know what you have to say by writing it here.

Thank you!

Interview structure

INTERVIEW STRUCTURE / Interviews of the Moved by Nature project

Start

What kind of things were nice or fun during the activity day in winter?

Activity days

What was it like, for you, on all the activity days (spring, fall, winter)

Explanations for the questionnaire answers:

- **Hiking:** Many did not quite like the hike (length, speed, etc.) – Why do you think that is?
- **Competition:** What do you think, why did many people not like that element very much (e.g. when looking for the checkpoints of Metsän mysteeri)?
- **Guidance and teaching:** What do you think, why did many people not quite like it?
- **The ponies:** Was it exciting or scary?

What was it like for you to be *together with your class* during the activity days?

Compared to normal school days.

What was it like for you to do *different physical activities* and *move* in the nature?

What was for you *the most memorable experience* or thing on the activity days?

Why do you think that especially was memorable for you?

The everyday

What makes you go to the nature?

(When or why do you go or get to go to the nature)

What kind of *places* in the nature do you like to go to or be in? Why?

What kind of places in the nature do you **not like** to go to or be in? Why?

What kind of *physical activity* in the nature do you like? Why?

What kind of physical activity in the nature do you **not like**? Why?

In your family, what do people think about being in the nature and moving in the nature?

The activity days and the everyday

What did you get out of taking part in the activity days?

Do you think that taking part in the activity days has had some effect on your moving in the nature or going to the nature?

If yes > **Examples** on what has changed.

If not > **Why** has nothing changed?

What else would you like to tell?

Answers to the item "I like to move about in nature, but do so fairly rarely because"

I like to move about in nature, but do so fairly rarely because __

(anonymised, cannot say and blank answers removed)

Responses in the spring survey

Sometimes I'm busy.
I don't have any forests near me.
sometimes I'm a bit tired or I have homework
I live in a city and I'm really busy.
I can't leave [my sibling] at home alone.
We only spend time in nature with my parents.
there's not always time
I just don't seem go into the forest for example
I don't have time
I don't normally have time and mum doesn't have time to go with me.
There's not enough time in my everyday life.

I have no friends in the forest
I don't go
I don't have time.
There's no time.
There aren't any forests nearby.
I don't like being there alone, it's boring.
There's no time.
Too tired
I do everything else
I don't always have time or I'm too tired

Responses in the autumn survey

I don't have time or I'm too tired
I go visit my friend we don't often go into the forest
it's so far away
I never have time
there's no time
there's no time
I'm too tired
there are so many hobbies
we train so much and
I cause ruckus in town
I'm tired
I just too tired to go
there's no time
there's no time
there's rarely any time
there's no forest nearby
I'm always at [the place of hobby]

there are no forests nearby but I like to go jogging
my days are pretty full
I don't have a lot of time
If I'm out I'm in a park or a similar place somewhere and not in a forest usually
there's no nature nearby
there's no forest nearby
because I have to go to practice
Sometimes I'm just too tired to go
there's no time
there are lots of other things
have other important things to do
there's no nature nearby
I have things to do
I have practice, but I often go with the dog in the evening or morning
I'm lazy
there's no time

Responses in the winter survey

there's not always time
there's no time
there's no time
There's no time
I don't always have friends that I could go into the forest with.
don't have a lot of time.
I don't have that much time, but I try to do at least 1 nature excursion a week
there's not much time during the week
there's no time
there's no motivation
Nothing to do
no time
too tired
my hobbies take up so much time and my homework.
sometimes I forget

I can find other things to do.
I don't have time.
I'm so busy
I have to go to basketball practice a lot and do other things
have a lot of homework and hobbies
I like to play games.

Answers to the item “Which things do you particularly enjoy when it comes to being and moving about in nature?”

Which things do you particularly enjoy when it comes to being and moving about in nature?
(anonymised, cannot say and blank answers removed)

Responses in the spring survey

fresh air, physical activities are fun
building huts, going on an adventure
fresh air
physical activities, fresh air
watering flowers, taking pictures of flowers
relaxes the mind
you can run and play or jump into puddles
catching bugs
You get to see a lot of life and have an open mind.
fishing, making shampoo
walking, sometimes cycling
beautiful things everywhere and fresh air
being with your own thoughts, walking the dog
fresh air
fresh air, you relax in nature
listening to birds, peace
takes your mind off everything bad
beautiful colours
you fall into a different world and it's wonderful
learning from nature

getting exercise
climbing on rocks, climbing
There are obstacles and you can jump and run along them.
you can see animals there
playing in nature
animals, smell of nature, sounds
animals, nature, sounds
good weather, nice landscape
it's nice to start playing forest games there
nice weather, getting exercise
peacefulness
wilderness experience
everything
cycling - off-routes
seeing animals in the wild, climbing trees
everything
walking along paths, walking

Responses in the autumn survey

jogging with dogs and others
climbing trees
beauty, freshness, almost everything
parkour, climbing
riding, running, swimming
hunting, picking mushrooms
climbing trees
walking
climbing trees
nature adventures and guessing games
taking the dog
calm, running with dogs
when you visit the forest and get to jump on rocks and walk on the roots
peacefulness
being with friends
you can do everything freely
nothing
cross-country running, walking the dog
landscapes, packed lunch
being in the forest with the dogs, picking mushrooms
silence, fresh air, sounds of animals
orienteering, just walking in the forest
you can do everything there
peace
it's peaceful there, a lot of creative things to do
eating
fresh air
silence, lots of space
peacefulness

it's easy to breathe and there's fresh air
hiking
basketball, badminton
Nice to walk and listen to music. You get lots of exercise and fresh air.
climbing trees, building huts
fresh air, fun
trees, bugs, moving around
walking
you can be freely in nature and move around as much as you want
football
looking for animals and just having an adventure in nature
fishing, having an adventure
going on an adventure, enjoying the landscape
sounds, peacefulness
nice, refreshing
fresh air, seeing new plants
fresh air, cycling
peacefulness, that there's no big rush
fresh air, sports
birds singing, peace
nature is really interesting
walking, playing, drawing
plants and mushrooms
it's nice there
it's uneven so you can jump to rocks tracks and that kind of terrain
forest
games, competitions, picking berries

everything?
 It's nice to play capture the flag in nature
 terrain and trees
 running, looking at the landscape
 the air is always better in the forest
 silence, bird song, plants
 Smells clean and fresh. Feels free.
 playing

Responses in the winter survey

You get fresh air, big plus if the company's good.
 I like building huts and having an adventure in
 the forest
 Birds, walking and trees. It's just fun.
 playing tag, hide and seek
 When you can take the dog out, you can go
 Walk, run, roam around.
 feels free
 Fishing, running, hiking, picking mushrooms
 Cycling in the forest, swimming in a lake and
 skiing
 It's peaceful and you can do many different
 things there.
 Cycling
 landscape, fresh air, animals/plants
 air freshness
 Peacefulness, there's no hurry, takes your mind
 off everyday
 I like silence and fresh air.
 Freedom and bird song.
 I like nature because I can feel the fresh air, see
 nice flowers and plants, like walking and
 running.
 I like the fresh air and clear view.
 I don't like moving about in nature
 peace
 because you can ride your bike in nature
 playing and picking berries
 air
 It's just fun
 fresh air
 Capture the flag, playing tag and walking.
 running
 you can ride your bike
 cycling, walking, running
 Fresh air
 beauty, calm
 Silence, mushroom picking
 Everything
 Cycling, walking
 Peace and quiet
 playing airsoft
 Silence
 Swimming, dog frisbee and just being
 Climbing trees
 Beautiful weather.
 Cycling

everything
 everything
 nice to play, fresh air
 playing
 silence
 playing airsoft
 silence

doing muscle exercises with natural
 sounds. Normal walking or trail running.
 Building huts, hunting, cycling and swimming
 When you can play hide and seek with the dog
 behind trees and rocks.
 Running
 Climbing rocks
 walking with the dogs
 Peace and opportunities
 Peace and jumping on roots
 That you have time for yourself and it's
 peaceful.
 I like it when it's peaceful and I like picking
 berries.
 Being with the dogs
 When you're with your friends and family
 playing with the dogs and friends
 that it's not so noisy
 silence
 snow and it's silent and you can do stuff
 water
 There's room and it's peaceful.
 peace
 roasting sausages over a campfire
 Silence and peacefulness

Most Recent Metsähallitus Nature Protection Publications

Series A

No 222 Rusanen, P., Mikkola-Roos, M. & Sammalkorpi, I. 2016: Espoon Laajalahden linnusto 1984–2012. 163 s.

No 223 Auttila, M., Heikkilä, P., Koskela, J., Kunasranta, M., Marttinen, I., Niemi, M., Tiilikainen, R. & Sipilä, T. 2016: Uudet menetelmät tehostavat saimaannorpan suojelua ja kannanseurantaa muuttuvassa ilmastossa. 20 s.

No 224 Snickars, M., Arnkil, A., Ekeboom, J., Kurvinen, L., Nieminen, A., Norkko, A., Riihimäki, A., Taponen, T., Valanko, S., Viitasalo, M. & Westerbom, M. 2016: Assessment of the status of the zoobenthos in the coastal waters of western Uusimaa, SW Finland – a tool for management. 53 s.

No 225 Kurvinen, L., Arnkil, A., Ekeboom, J., Björkman, U., Sahla, M., Ivkovic, D., Riihimäki, A. & Haldin, M. 2017: Meri- ja rannikon luonnonsuojelualueiden tietotarpeet – MeriHOTT-hankkeen loppuraportti. 88 s.

No 226 Väsa, R., Högmänder, J., Nordström, M., Kosonen, E., Laine, J., von Numers, M. & Rönkä, M. 2017: Saaristolinnuston historia, kannankehitys ja nykytila Turun saaristossa. 310 s.

No 227 Kurvinen, L. & Westerbom, M. 2017: Allien syyslevähdysalueiden vedenalaiset inventoinnit Porkkalassa. 45 s.

No 228 Hasanen, E. & Vähäsarja, K. 2019: Luonto lisää liikettä – Mikä innostaa kouluikäistä? 103 s.

Series B

No 242 Kuusisto, K. 2018: Urho Kekkosen kansallispuiston kävijätutkimus 2017. 84 s.

No 243 Paulus, E. 2019: Ruunaan retkeilyalueen kävijätutkimus 2017. 64 s.

No 244 Salonen, D. & Veteläinen, T. 2019: Hosan kansallispuiston kävijätutkimus 2017–2018. 73 s.

No 245 Kamppuri, E.-N. 2019: Koloveden kansallispuiston kävijätutkimus 2018. 62 s.

No 246 Kuusisto, K. 2019: Evon retkeilyalueen kävijätutkimus 2018. 55 s.

Series C

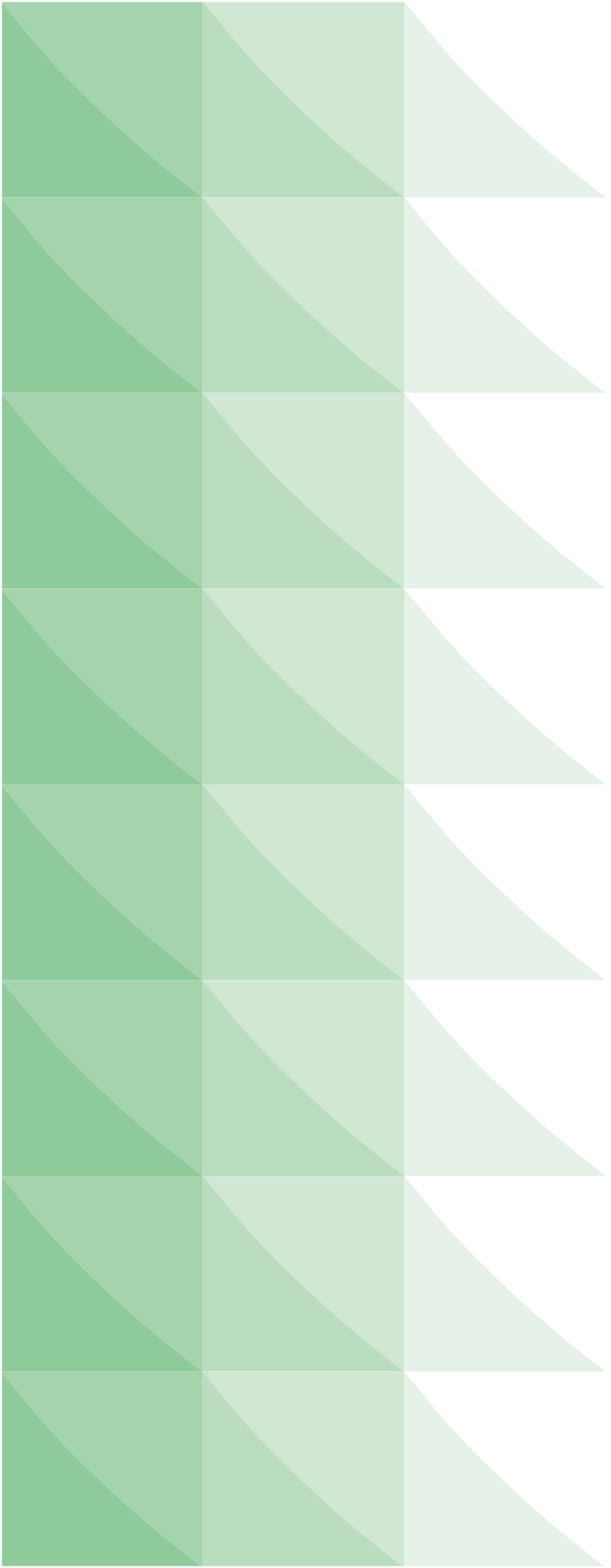
No 161 Metsähallitus 2017: Kylmäluoman retkeilyalueen hoito- ja käyttösuunnitelma 2017–2032. 89 s.

No 162 Metsähallitus 2018: Puljun erämaan Natura 2000 -alueen hoito- ja käyttösuunnitelma. 83 s.

No 163 Metsähallitus 2018: Saarijärven vanhojen metsien hoito- ja käyttösuunnitelma 2011–2025. 80 s.

No 164 Metsähallitus 2018: Vintilänkairan, Koitelaisen ja Pomokairan Natura 2000 -alueiden hoito- ja käyttösuunnitelma. 75 s.

No 165 Siira, H. & Sulkava, P. 2019: Pallas–Yllästunturin kansallispuiston luontomatkatkailusuunnitelma. 66 s.



ISSN-L 1235-6549
ISSN (VERKKOJULKAISU) 1799-537X
ISBN 978-952-295-251-6 (PDF)
JULKAISUT.METSA.FI