



REFERENCE GUIDE

Nature-based
early childhood
education



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Credits

Alex—Reference guide on nature-based early childhood education

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- CPE La Magie du Rêve, à Val-d’Or
- CPE Les Mousses, à St-Rédempteur
- CPE Les P’tits bécots, à Baie-Comeau
- CPE Les Tourterelles, à Rigaud
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- CPE Rosamie, à Laval
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- CPE-BC des Lutins, à Saguenay
- CPE-BC Force Vive, à Laval
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Glossary

Acronyms

AGM	Annual general meeting
AQCPE	Association québécoise des centres de la petite enfance
AROHS	Act Respecting Occupational Health and Safety
CISSS/ CIUSSS	Integrated health and social services centre/ Integrated university health and social services centre (from French: Centre intégré de santé et de services sociaux et Centre intégré universitaire de santé et de services sociaux)
CO	A Coordinating office, responsible for a specific territory, coordinates and supervises home educational childcare providers
CPE	Childcare centers (from French: CPE, Centre de la petite enfance. We decided to keep the acronym CPE in French in the text because it's well known in English as well.)
CSA	Canadian Standards Association
EE	Environmental education
OHS	Occupational Health and Safety
PPE	Personal protective equipment
R-B	Risk-benefit
HECP	Home educational childcare provider (from French: RSGE, responsable d'un service de garde éducatif en milieu familial)
SÉPAQ	Société des établissements de plein air du Québec
ECS	Educational childcare services (from French: SGEE, services de garde éducatifs à l'enfance, which include CPE, HECP and other daycare providers)

Definitions

Biodiversity

Comprises all living species on earth, their interrelationships, as well as the different genes, ecosystems, and species.^a

Budding skill

A child's skill on the verge of blossoming, also referred to as zone of proximal development.^b

^a Biodivcanada, Canadian forum for discussion of biodiversity issue

^b A concept that emerged from the *Jeux d'enfants approach*, Cégep St-Jérôme

Hazard

A potential source of harm or danger. A hazard is any source likely to entail damages (physical injuries or damage to health) or other negative consequences (for example, hospitalization, disability, etc.) for humans.^c

Scaffolding

A type of facilitation whereby a partner, with more advanced skills than the children, provides them with learning support to enable them to enhance their skills in a given situation and build their independence.^d

Free play

Play is a voluntary engagement in activity that is fun and/or rewarding and driven by intrinsic motivation. Free play is a form of play that is unstructured and self-directed.^e

Natural environment

Non-built surroundings and conditions in nature in which living and non-living things co-exist.^f

Playground naturalization

A process that redesigns an area with the aim of enabling young children to connect with nature and handle natural elements for the purpose of playing or learning.^f

Risk-taking

A decision involving a choice with a given degree of uncertainty regarding the possibilities of failure or success. Each possibility has a purpose, a benefit associated with the risk.^h

Acceptable risk-taking

In order for risk-taking to be acceptable for children, the benefits (new skills, feeling of pride and competency, discovery of limits, etc.) must outweigh the possible negative outcomes. Children must be able to recognize the challenges and uncertainties within the environment and learn to manage them.ⁱ

^c Reference document, *Sécurité bien dosée, une question d'équilibre*, TMVPA (2018)

^d Cloutier, S. (2012). *L'échafaudage: agir comme guide pour soutenir l'autonomie: pour un enfant à son plein potentiel*. PUQ.

^e Taken from the parent information sheet *Qu'est-ce que le jeu libre et actif?* Projet Bouger pour bien se développer, AQCPE. Outdoor Play Canada (2022) : <https://www.outdoorplaycanada.ca/plato-net/>

^f <http://www.thesaurus.gouv.qc.ca/tag/terme.do?id=13549>

^g <https://www.guides-sports-loisirs.ca/projetespaces/espaces-jeu-enfants/lexique/>

^h Reference document, *Sécurité bien dosée, une question d'équilibre*, TMVPA (2018)

ⁱ *Sécurité bien dosée, enfant comblé!* Brochure in the series *À nous de jouer*, TMVPA (2020)

Safety

A state in which dangers and conditions that may cause physical, psychological, or material harm are controlled in a way that preserves the health and well-being of individuals and the community. k Physical and emotional safety is a fundamental human need. l When children feel safe, they can develop appropriately and thrive. It is important to understand that the word 'safe' can mean different things to different people.

Well-balanced safety

An approach that encourages acceptable risk-taking for the benefit of the individual's development, while putting in place a safety framework that simultaneously takes into account the physical environment, the individual's attitude, and the equipment and facilitation available to them.^m

Zoonose

Zoonotic diseases are illnesses or infections caused by viruses, bacteria, parasites, fungi, and prions that can naturally be passed from animals to humans.ⁿ

^m Sécurité bien dosée, une question d'équilibre! Document de référence, TMVPA (2018)

ⁿ Definition adopted by the Observatoire multipartite québécois sur les zoonoses et l'adaptation aux changements climatiques (2 nov. 2015), adapted from the definition used by the World Health Organization.



The Reference Guide: an overview

Who is it for?

The *Nature-based early childhood education reference guide* is intended for managers, members of the board of directors, staff, parents, and anyone else involved in educational childcare services seeking to implement nature-based education. It is also intended for students in professional training programs leading to a career in early childhood educational services, as well as anyone else interested in nature-based education for children aged 0 to 5.

Objectives

- To promote nature-based educational approaches within Québec's network of ECSs.
- To support Québec's ECSs commitment to implementing nature-based educational approaches.
- To recognize the contributions nature-based education makes to whole-child development and to fostering children's nature connectedness from an early age.
- To contribute to the skills development of current and future educators/home childcare providers

Content

- **Knowledge** resulting from research conducted in Québec and elsewhere in the world.
- A suggested **process** founded on the nature-based education continuum.
- **8 core principles** to help direct the implementation of nature-based education.
- Suggested **structuring measures** to ensure the long-term viability of nature-based education.
- Concisely worded, concrete **technical information** sheets.
- **Key characteristics** for monitoring the implementation of the 8 principles—part of a **self-assessment tool** accessible via hyperlink.
- **Exercises** to help gain a better understanding of the 8 principles.

Look out for the following symbol:



- A **glossary** to ensure a common language.

The reference guide contains many examples, photographs, diagrams, and tables to make it easier to understand.

The content is the result of reflections and work undertaken as part of *Grandir en forêt* and *Alex*, two projects carried out, respectively, by Initiative 1, 2, 3, Go! Limoilou and AQCPE. All photographs featured were taken in one of the participating CPEs, COs, or home educational childcare providers in Phase 1 of the *Alex* project.

The examples presented in italics are a result of, or are based on, actual situations experienced in one of these sites. The names and other identifying details have been changed to help ensure the confidentiality of the individuals concerned.

The various chapters feature statements provided by children, parents, educators, pedagogical leaders, managers, and HECs. These statements, which are presented in italics and in quotation marks, were made by individuals who participated in the *Alex* project, as well as by those who took part in the *Alex—Éducation par la nature* research project, conducted by Caroline Bouchard, Faculty of Education, Université Laval. Additional photographs, video clips, and filmed accounts can be found in the *Alex* section of the [AQCPE website](#).

How to use this reference guide

When putting together this reference guide, care was taken not only to provide ample relevant content from start to finish but also to ensure that the content of individual sections could serve as standalone material. The chapter on research highlights precedes all others. It serves as a foundation on current knowledge concerning the vast field of nature-based early childhood education. The next chapter outlines how a nature-based approach can be integrated into the learning environment, followed by eight chapters on each of the eight core principles and two additional chapters covering complementary topics. And finally, rounding off the reference guide is a last section containing exercises, technical information sheets, and templates to help with the implementation process.

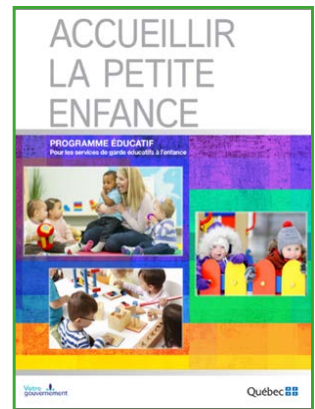
Acknowledging the diverse needs of individual ECS and the variety of actors involved, this reference guide was designed to be approached and used in different ways. As such, it is possible to begin with a chapter covering a topic the reader is less familiar with—recent educational trends, for example—or to skip ahead to the technical information sheet mapping out the basics of how to set up a base camp, to address the practical aspects involved in implementing nature-based education. In other words, readers can consult the guide according to their specific needs, interests, and questions.

Nature-based education and the *Accueillir la petite enfance* education program: a high degree of consistency

« Béatrice realized that young children become very talkative when they relate their experiences through land art—their creations made from items found in the natural environment (leaves, pebbles, branches, pine cones, flowers, etc.). »

Nature-based education and the *Accueillir la petite enfance* education program are mutually compatible and complementary. In fact, the foundations, basic principles, educational intervention process, and the educational quality dimensions outlined in the *Accueillir la petite enfance* education program are all connected to the 8 nature-based education principles. Many of these connections are highlighted throughout the chapters in this reference guide.

Nature-based education encourages the exploration of new contexts and avenues outside the traditional educational framework, while at the same time maintaining a great degree of consistency with Québec's education program.



Nature-based education and the *Gazelle et Potiron* reference guide²

The approach taken in this reference guide intentionally allows for the implementation of many of the same guidelines present in the *Gazelle et Potiron* reference guide: (8) Offer plenty of opportunities for active play throughout the day, (9) Limit the time devoted to sedentary activities, (10) Encourage active play with activities that are fun and challenging, (11) Play outdoors on a daily basis as often as possible, and (12) Create indoor and outdoor environments that are stimulating, functional, and safe.



The Alex movement

The Alex project: an invitation to rethink our vision of early childhood education

The quality of the interactions between adults and children is one of the cornerstones of the early childhood educational environment. What contexts can encourage high-quality interactions? Several recent research projects undertaken throughout the world highlight the importance of facilitated, free play in the natural environment for whole-child development. Moreover, it positions the network of ECSs as a vector for change in response to global environmental issues and challenges.

Based primarily on the experience of the Grandir en forêt à Limoilou,^P project, the AQCPE launched the Alex project in 2018, a Québec-wide initiative in support of nature-based education. The Alex project drew on various experiences and sources: immersion in forest/nature preschools in northern Europe and elsewhere; place-based education; the Reggio-Emilia/Tuscany educational philosophies, environmental education, etc. It is also based on recent scientific knowledge on child health/development and educational issues. This guide builds on the Alex project and its CPEs and coordinating offices located throughout Québec. The Alex project, by way of this reference guide, proposes a Québec vision of nature-based education. With the support of the Government of Québec, this reference guide encourages ECSs to explore new educational contexts and avenues for young children that are grounded in the 21st century. Based on a French-language play on words—“Alex” sounds the same as “à l’extérieur”, meaning “outdoors” or “outside”—the project and reference guide advocates for outdoor activities and thinking outside conventional educational frameworks.



^P Led by the initiative 1, 2, 3, Go! Limoilou, Grandir en forêt has gathered several ECSs of this urban neighbourhood around a nature immersive project since 2017.





01

Why and how to become involved in nature-based education?



REFERENCE GUIDE
Nature-based early childhood education



Research highlights on nature-based education^q

- Why choose nature-based education?
- What are the effects of nature-based education on whole-child development? Are there specific developmental aspects that benefit to a greater/lesser degree?
- If there aren't any language-focused activities during outings in the natural environment, will the children still develop language skills?
- What is the ideal frequency and duration of activities in the natural environment?
- What are some best practices to implement in nature-based education?
- How do educators/HECP/ECSs ensure the safety of children they care for when outdoors? Do all children learn how to manage risks in the same way?

Nature-based education gives rise to many questions. Major questions surround its relevance and developmental effects, and which practices should be prioritized. In addition to trialing nature-based education on their own, ECSs would benefit from relying on research to make informed decisions.

The growing interest in nature-based education has led many researchers in Canada and elsewhere in the world to turn their attention to the subject in recent years. What do these research projects focus on, and what can we learn from them? To find out, the Alex project joined forces with Caroline Bouchard, Faculty of Education, Université Laval, and her research team to carry out a systematic literature review on nature-based education and its influences on child development. Furthermore, the Alex project oversaw a narrative review covering health and safety issues in nature-based education contexts. The key findings of these reviews are presented below.

^q AQCPE produced this chapter in collaboration with Caroline Bouchard, Faculty of Education, Université Laval, and her team. A modified version of this chapter was published in the form of two articles in the *Revue préscolaire, Association d'éducation préscolaire du Québec*, Nov.2020.

1. Two systematic reviews on nature-based education and child development

By compiling and analyzing scientific articles on nature-based education from all over the world, published between 2010 and 2019, the research team attempted to answer the following two questions:

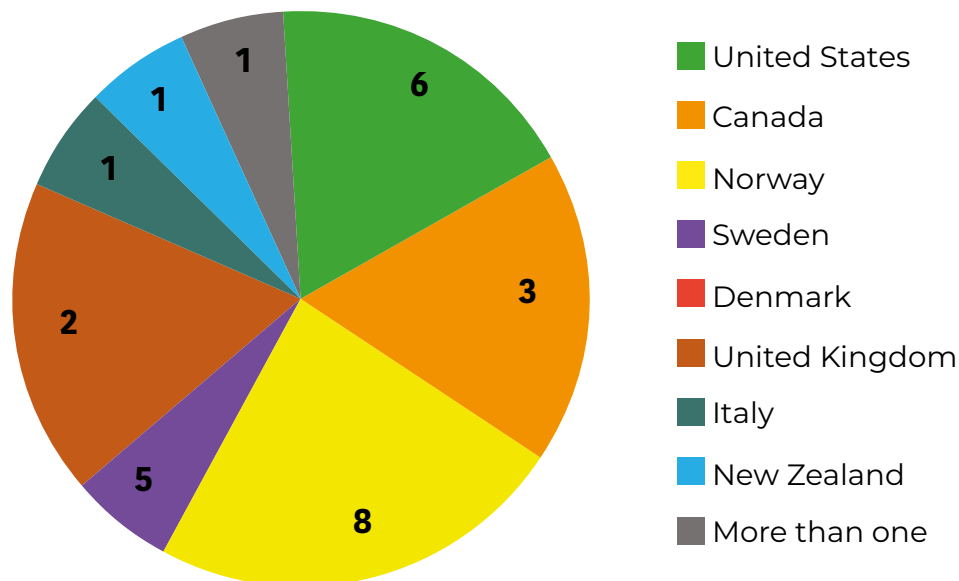
- How does nature-based education contribute to whole-child development?
- What practices do educators/HECP/ECSs or teachers adopt in nature-based educational contexts and how do they implement them?

Two systematic reviews¹ were carried out, one for each of these questions. Starting with over 1000 initially identified articles, the authors included **17 scientific articles devoted to whole-child development** and **45 articles dealing with educational practices** implemented in nature-based educational contexts. Eight (8) of the articles feature in both reviews.

Where do these articles come from?

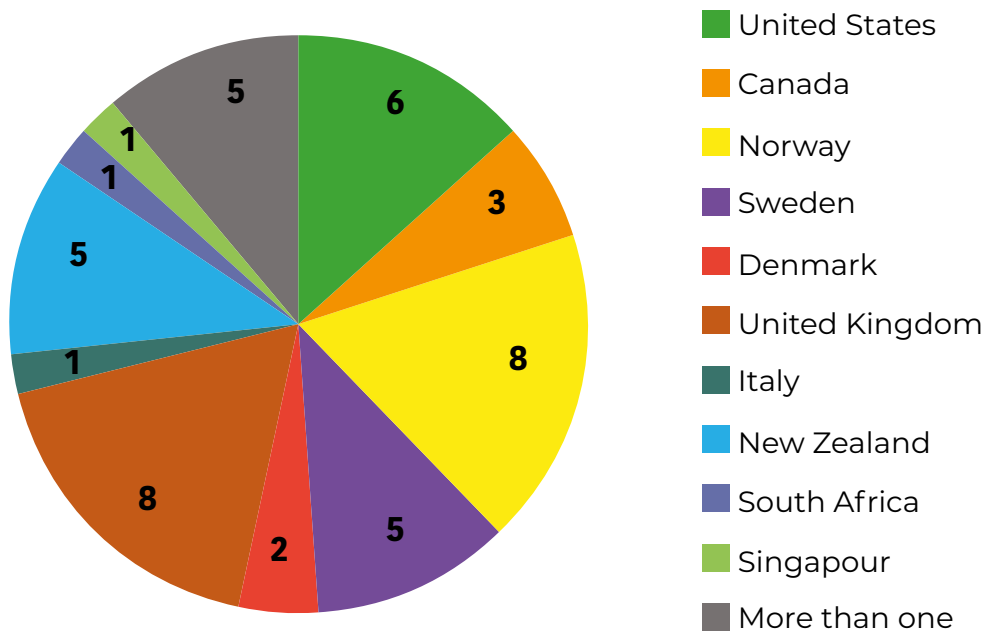
As shown in figures 1 and 2, the selected studies were carried out in different regions of the world, including northern Europe, Oceania, and North America.

Fig. 1 Geographic origin of studies included (n=17) in the review of nature-based education and whole-child development



¹Systematic review = exhaustive search for scientific studies published on a given subject, selection based on pre-set criteria and critical analysis in order to reveal observations or key findings. This approach involves a rigorous process of selecting articles whose quality is guaranteed since several researchers have reviewed them.

Fig. 2 Geographic origin of studies included (n=45) in the review of nature-based educational practices



What types of studies are they?

Most of the included research studies were qualitative in nature (59%, 10/17; 76%, 34/45; Fig. 3 and 4). Data collection methods consisted of interviews and observations to explore the experiences and perceptions of children, parents, and educators/HECP/ECSs on how nature-based education is organized and how children develop in that context. Researchers relied on the words and statement of those involved for their analysis above all else!

Several research studies were quantitative in nature (29%, 5/17; 16%, 7/45; Fig. 3 and 4). The researchers measured certain aspects of the educational practices or of whole-child development with the help of measurement tools: observation or assessment checklists, questionnaires, etc. They then proceeded to analyze how the data collected varied according to specific variables, including children’s age, the educators’/HECP level of education, etc. In this case, it was primarily figures and numbers that were analyzed!

And finally, there were a few mixed-method research studies included (12%, n=2/17; 9%, 4/45; Fig 3 and 4) that used both qualitative and quantitative methods.

Figures 3 and 4 show the number of studies in each of these categories.

Fig. 3 Types of studies included in the scoping review of nature-based education and whole-child development

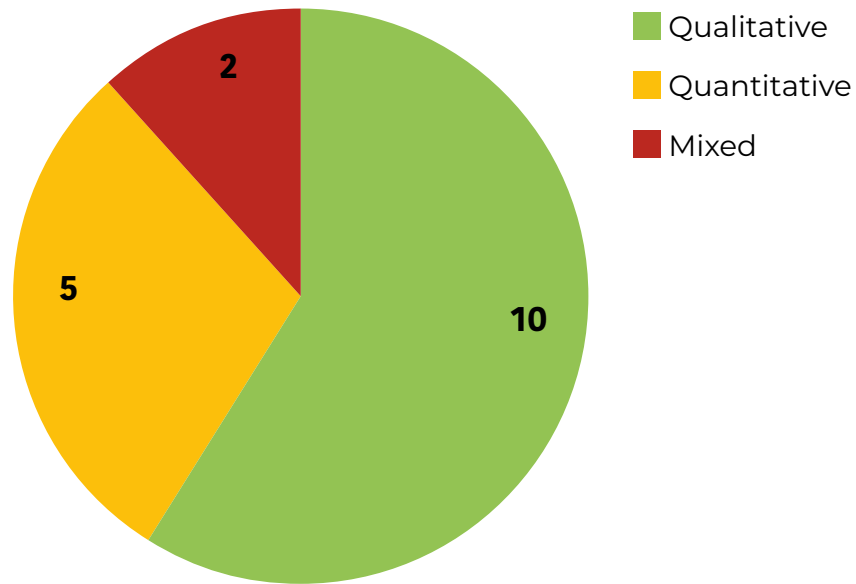
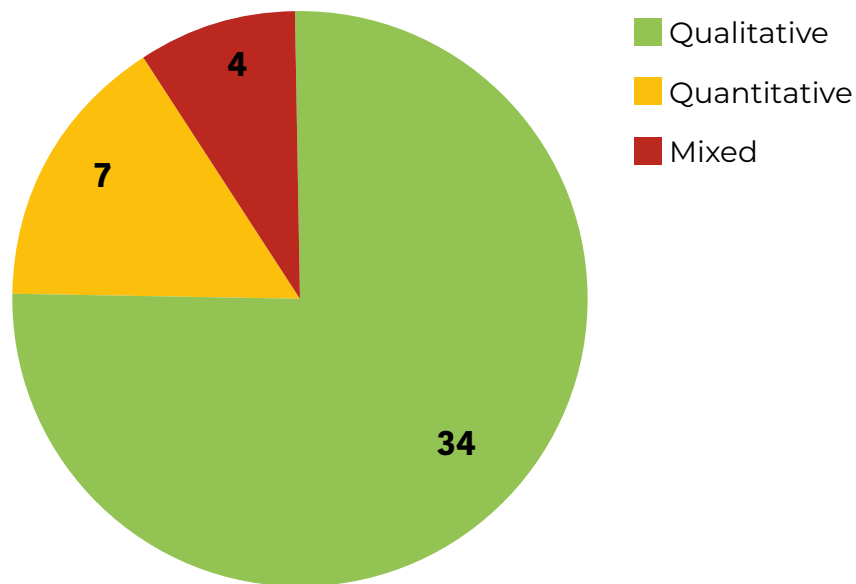


Fig. 4 Types of studies included in the scoping review of nature-based educational practices



It should be pointed out that a majority of the included studies looked at the effects of attendance (e.g., two days per week vs daily attendance) at a natural space. Even though most studies involved children aged 3 and older, a certain number looked into the experiences of infants and toddlers (three studies including children under one year of age, 10 including children between one and two years and 13 including children between two and three years).

The included articles highlight several elements guiding educational practices as well as identify areas for further research. These elements are presented in the following two sub-sections.

1.1 What these two reviews tell us

1.1.1 Nature-based education and whole-child development

While unable to confirm or refute any cause-and-effect associations between nature-based education and development, the included studies do support a better understanding of aspects of natural environments that may be important for whole-child development.

Physical and motor skills development

In the included studies, one observed pattern is the importance of the physical environment and natural elements in supporting children to move at **a variety of intensity levels**³⁻⁴ and to explore a **greater variety of movements** than in traditional childcare spaces.⁵ In a natural environment, children are inclined to push their physical limits, which enables them to **overcome new challenges**.⁶ Their involvement in games that include risks,⁷⁻⁸ such as tag (i.e., play at fast speeds) on sloping terrain or over obstacles, contribute to their motor skills and emotional development.⁹⁻¹⁰⁻¹¹

Moreover, in a longitudinal study involving 562 Norwegian children, researchers showed that **the more time children spend outdoors, the less they exhibit symptoms of hyperactivity**.¹² Whether there are specific aspects of outdoor experiences that contribute to these observed effects remains to be determined.¹³



Social and emotional development

In a natural environment, even a vast and initially unfamiliar one, children succeed in **developing their ability to assert themselves, their self-confidence, and their sense of control over what happens to them, in particular by managing risks.**^{14-15,16} Wild, unstructured nature and the absence of pre-determined activities can have a destabilizing effect on young children who are used to being cared for by an adult. Once they have overcome these challenges, however, children emerge from their experiences in the natural environment with a heightened sense of self-confidence.

Exploring the physical environment is conducive to the **development of their self-regulation.**¹⁷ At the same time, they learn to ensure their own safety. In fact, even when they aren't moving, children are attentive to possible risks and are aware of the measures to take, not only to **ensure their own safety and well-being, but also that of their peers.**¹⁸

Other studies show that every child approaches the natural environment in a unique and individual way. As such, children are not attracted to the same activities,¹⁹ which allows them to assert their individual **personalities**. Of note is that children's games do **not or only somewhat conform to gender stereotypes** in natural environments.²⁰

By encouraging spontaneous bonding and interactions within the group, nature-based education is **conducive to the development of relationships among peers and to negotiations between them.**¹⁻²² Friendships form in the process.²³ It should be pointed out that symbolic and sociodramatic play activities (involving several individuals) arise organically, thanks to, among other things, the presence of natural loose parts and open-ended materials. According to McClain & Vandermaas-Peeler (2016), children in natural environments display more positive than negative social behaviours. Furthermore, contact with the animal world, such as the discovery of a dead squirrel and the questions that arise in connection with it, **encourage children to consider the perspective of others and to show empathy.**²⁴

Language development

In natural environments, children **develop narration skills**, through a variety of symbolic play activities²⁵⁻²⁶ **Enhanced oral language skills** can be noted after one year spent in a nature-based education context²⁷ Moreover, a study on the **emergence of writing skills** (reading and writing) found evidence of favourable development among children who regularly spend time in a natural environment.²⁸



Cognitive development

Through their symbolic play, children **develop creativity**.^{29_0_31_32} as evidenced by **enhanced originality and imagination**.³³ Furthermore, the exploration of nature encourages the **development of knowledge about the living and non-living world**.³⁴ Ulset et al. (2017) also note that children who spend more time outdoors have **better memory and fewer attention problems**. The findings of McCree et al. (2018) indicate **enhanced mathematical skills** in children, while another study³⁵ reported that time spent in nature is favourably associated with the **development of abstract concepts**, such as the concept of death.



In short, the collective studies suggest that a nature-based educational approach supports the development of the whole child. Nevertheless, further research is required to confirm the causal relationships between nature-based education and child development, by conducting randomized controlled trials that use a control group consisting of children with no experience of nature-based education. This would make it possible to compare this context to other educational approaches or contexts to clarify causal relationships and the strengths and weaknesses of each approach.

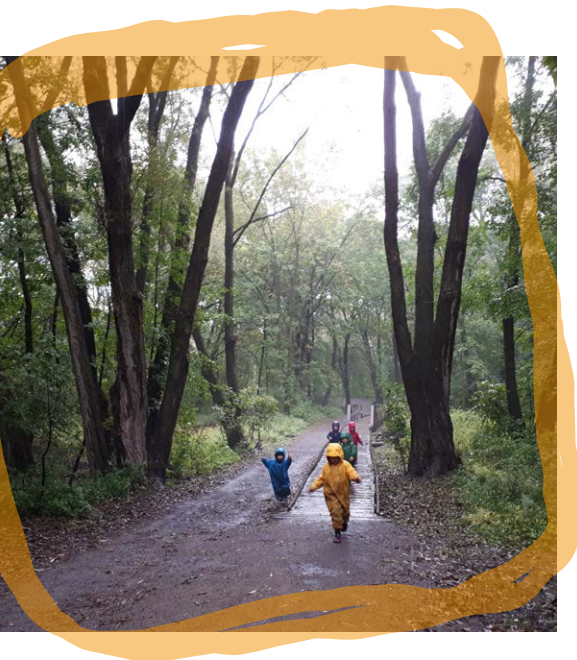


1.1.2 Educational practices adopted in nature-based education contexts

What educational practices are prioritized in nature-based education? What does the research undertaken to date say on the subject? Preliminary analyses of the 45 listed studies suggest there are several major themes that can be generally categorized as indirect and direct interventions. Indirect interventions refer to the frequency and duration of the sessions in nature, the place frequented, etc. Direct interventions refer to the educator's/ HCEP's manner of interacting with the children: observation, risk management, learning and development support, etc.

Indirect interventions

The **duration** of the periods spent outdoors appears to be a significant variable to consider when planning nature-based education. A large-scale Québec-Norwegian study³⁶ showed that **the more time children spend playing and exploring outdoors, the greater the benefits for their development**. This finding is based on the analysis of the cognitive and behavioral development of 562 young children aged 3-7 years, followed over a period of 4 years, according to time spent outdoors on a daily basis (depending on the community, a daily average of between 1 and 9 hours throughout the year).



The importance of **frequency** of sessions in a natural environment was also a recurring theme in the articles reviewed. Several papers highlighted the importance of repeatedly going to the same outdoor space,³⁷ The importance of frequency of sessions in a natural environment was also a recurring theme in the articles reviewed. Several papers highlighted the importance of **repeatedly going to the same outdoor space**,³⁸ to optimize the benefits of the experience. Moreover, one study reported the commitment demonstrated by the children in rainy weather, as well as the pleasure and excitement they felt, while nevertheless also noting that this positive perception of the rain can vary depending on the cultural context.³⁹

The **choice of natural site** also appears to be a crucial consideration. Some studies identified key criteria for guiding this choice: (1) Options for free play and exploration,⁴⁰ (2) Safety considerations,⁴¹ (3) The site's ease of use and the

presence of naturally-occurring materials,⁴² and (4) The proximity and accessibility of the site⁴³⁻⁴⁴ In short, the characteristics of the site can have considerable influence on children's activities. **Wide, open spaces stimulate children's desire to run and engage in vigorous activity.** Moreover, the presence of natural elements in the outdoor play environment, even if it is a playground, encourages sensory and motor stimulation.⁴⁵

A Danish study showed that in sites where there were big trees, rotten or pointed branches, rocks, slippery slopes, etc., children new to the site often tripped and fell, but quickly learned to manage these challenges and became skilled at navigating these elements, continuously, strategically readjusting to the terrain and developing a strong sense of confidence.⁴⁶

Educators are **divided on the relevance of adding structural elements or equipment** to the natural environment, for example by constructing a platform in a tree or setting up a fire pit. They acknowledge that children are inspired and mobilized by such additions. However, they also note that these additions can have the effect of considerably limiting the exploration of the natural environment as-is⁷ Furthermore, one study points out that given the absence of added educational equipment, the relationships between the children and the educator can be intensified, thereby enabling the educator to play their role more effectively.⁴⁸



The educators' reflections emphasize the importance that the children **familiarize themselves with the chosen site** by getting to know it on different days, and to perceive the site's potentials and scope for change.⁴⁹ The educators also mention that setting up a **base camp**⁵⁰ creates a location where the children and their teacher can gather for discussion before returning to their play and exploration activities.



However, not all educators and researchers agree on the importance of always frequenting the same site. Despite the above-mentioned advantages of spending time at the same site⁵⁰ other research reports that children are inspired by changes of site and the new opportunities for exploration that such changes offer.⁵¹ As such, it is also **advisable to change the outdoor educational sites**, especially when it begins to offer fewer sensory and motor stimulation opportunities, according to the children's needs.⁵²

That being said, many researchers report that it is **the educator's/HECP's facilitation and support in connection with the children's play and other actions that make the environment into a learning-friendly context.**⁵³

Direct interventions—interactions between the educator/HECP and the children

The reviewed articles list a variety of direct interventions, focusing on interactions between the educator/HECP and children. However, some practices are recurring and make it possible to establish some commonalities.

In a natural setting, educators/HECPs do not control the environment. As such, they may more readily assume a **position as fellow explorers or fellow learners**,⁵⁴ encouraging the children to use their senses to listen, watch, feel, and touch, thereby stimulating their sense of wonder and curiosity.⁵⁵ The resulting **moments of joint attention**, meaning the sharing of a sustained and genuine interest for a specific element of nature—for example the frost on trees—constitute a powerful means to support children's learning⁵⁶ and the development of their nature connectedness.⁵⁷

Children's reflections and questions arising from changes in the environment can create a meaningful and learning-friendly context.⁵⁸ An inquiry-based approach fosters the **development of reasoning**. Children try to understand what they discover or the challenges they face. They learn to make assumptions. The living and the non-living world are a never-ending source of questioning and learning. The educator's/HECP's **support** gives the children an opportunity to describe, compare, group together, etc. **By interacting with the children in response to their questions**, the educator/HECP may help them develop their thinking, establish connections, and anticipate the future.⁵⁹

When **planning**, the educators/HECPs are encouraged to **trust that the natural environment will provide a wealth of experiences allow them to focus on explorations and projects initiated and carried out by the children**. The outdoor sessions are only minimally structured. The children can choose to play or explore, either alone or in self-selected small groups.⁶⁰ The educational activity **depends on the children's intrinsic motivation**. It is also up to the children to let the educator/HECP know when they need support or facilitation.⁶¹ Educators' descriptions of the Bush Kinder (childcare facilities in Australian forests) education method is particularly telling: "letting go and accepting that the bush setting will provide the play and learning opportunities."⁶²

The educators/HECPs are encouraged to act as observers and only **intervene when deemed appropriate** to support the children’s learning and development. For example, it is recommended that educators/HECPs be attentive, but resist getting involved in play activities unless they are specifically invited to do so by one of the children.⁶³ In addition to offering children appropriate support, by observing, educators/HECPs have an opportunity to document examples of children’s creativity, imagination, reasoning, etc. By relying on this kind of **documentation**, the educators/HECPs **may support the children’s verbal exchanges and stories**, from which new learning emerges⁶⁴⁻⁶⁵ Moreover, their observations and interpretations of the children’s play activities and their whole-child development may be reinforced.⁶⁶



Furthermore, regular time spent in natural environments may **support the development of children’s autonomy in the following ways:** ⁶⁷⁻⁶⁸

- Recognizing the signals given by their bodies and perceiving whether they are appropriately dressed, or need to add another layer of clothing
- Gradually becoming responsible for their bag, water bottle, and clean change of clothes
- Adapting to the wild aspect of nature and building their resilience Recognizing and expressing their needs



Interventions in connection with risk management

Risk management practices was a common topic among the included studies, according to which nature-based education projects **recognize the importance for young children to take risks.**⁶⁹ Educators point out that children need challenges to support their development, and they must be encouraged to take risks appropriate to their age group, without neglecting the importance of their safety. For example, in a study on outdoor learning in Canada, one educator declared: “We like to remove the hazard and not the risk.”⁷⁰

However, a study of British educators documented the tension that exists between the theoretical value associated with risk-taking and the educator/HECP’s sense of responsibility towards young children’s safety. Moreover, these educators reported differences of opinion between their perception of risk and that of parents or other stakeholders.⁷¹ A Norwegian study reported similar findings,⁷² and highlighted the strictness of safety rules in early childhood education contexts..

As a result of these tensions and differences of opinion, practices can vary considerably. For example, educators may not see eye to eye concerning the risk associated with climbing a tree. It is sometimes prohibited and sometimes encouraged, or it is subject to a maximum height, the cutting of branches, the presence of an adult, etc.⁷³

However, there appears to be widespread agreement on practices concerning the risk of getting lost. As most sites aren't fenced off, the children appear to have internalized clearly established limits.⁷⁴ In order to restrict the space in which children can venture, educators often establish a code for gathering everyone together and encourage the setting of imaginary limits and waiting areas. For example, a general rule-of-thumb is that if a child can no longer see their educator they must return to the waiting area, where the educator will come and find them.



These key research findings offer up suggestions on how to guide nature-based early education practices with children. Nevertheless, several questions warrant being explored further. For example, the research project known as Alex—Éducation par la nature: Une approche innovante pour favoriser la réussite éducative des jeunes enfants (*Alex—nature-based education: an innovative approach to encourage young children's educational achievement*), carried out by Caroline Bouchard (Faculty of Education, Université Laval) and her team, in collaboration with the AQCPE, explored the quality of interactions between groups of children aged 3 to 5 years in nature-based educational contexts in Québec. Among the preliminary findings of this study, the quality of interactions appears to be generally higher in natural environments than in facilities.



2. A review of health and safety issues in nature-based education

In the spring of 2020, a review of the scientific literature published between 2000-2020 focused on health and safety issues in nature-based education contexts was carried out by AQCPE and Caroline Bouchard's team. An initial observation was that documents specifically addressing these issues are comparatively rare. As a result, the authors broadened their scope to include contact with nature and access to green spaces or parks. In total, 206 articles were included in the review.

The main outcomes concerning health were connected to the broad range of potential benefits associated with nature-based education or children's contact with nature. The reviewed research revealed that either positive or neutral effects arise from contact with nature, with virtually no indications of negative effects.

2.1 Physical health

The scientific literature indicates that in recent years children's physical health has become a growing problem: childhood obesity, type 2 diabetes, asthma, myopia, vitamin D deficiency, attention deficit and hyperactivity disorder are on the rise⁷⁵ The literature further reports that the rise in sedentary lifestyles is having a major negative impact on children's health.

One solution proposed to counteract these negative effects is enhanced contact with nature and more frequent outdoor activities⁷⁶ Natural environments have the potential to positively influence health by encouraging physical activities and social contacts.⁷⁷ Moreover, they play a role in reducing stress, and counteract noise and air pollution as well as heat exposure.

Asthma and allergies

Access to green spaces and reduced atmospheric pollution in living environments can act as protective factors against childhood asthma and allergies^{78,79,80}

⁷⁵ Scientific articles and other publications



Sedentary behaviour and obesity

Promoting outdoor activities and contact with nature is beneficial in reducing sedentary behaviours and obesity.⁸¹ According to a Finnish study, switching from a traditional educational environment to an outdoor learning environment served to reduce children's sedentary time and led to an increase in time spent engaging in low- and moderate-intensity physical activity during the day.⁸²

Attention deficit disorder

The effects produced by green spaces and contact with nature are of particular interest for children who suffer from attention deficit disorders, as they promote a sense of calm, sensory stimulation, attention, and stress reduction.⁸³

Blood pressure

Exposure to greenery at an early age is associated with low blood pressure in young adults.⁸⁴

Eye health and myopia

The time spent in front of a screen can have a negative impact on eye health and is a contributing factor to the soaring rates of myopia among children.⁸ Conversely, time spent playing and engaging in physical activities outdoors has a positive effect on the retinal microvascular structure and contributes to a lower incidence of myopia.^{85,86}

2.2 Well-being and mental health

The presence of greenery in neighbourhoods, contact with animals, and time spent in a natural setting are associated with improved mental health in young children, especially in densely populated areas.^{87,88,89,90,91,92,93,94,95,96,97}

Stress, mental health, and the immune system

Green school grounds can help reduce stress, promote attention, reduce behavioural problems, and strengthen factors associated with resilience in children of all ages.⁹⁸

The development of psychiatric disorders in adulthood is thought to be associated with an exaggerated immune response, which may in turn be connected to limited exposure to diverse microbial environments in childhood.⁹⁹ Spending time in the company of animals during childhood may positively impact the immune system adults, which may in turn improve mental health outcomes, particularly the ability to manage stress.

Children raised in rural environments appear to develop fewer mental health problems as adults than children living in urban areas without any contact with animals.¹⁰⁰

Furthermore, formal animal-assisted therapy initiatives have shown that contact with animals is associated with numerous mental health benefits in children, especially in children with special needs.¹⁰¹



2.3 Contact with animals and zoonotic diseases

Children's contact with the animal world sits at the crossroads of the benefits and risks associated with animal exposure. Zoonotic diseases appear to be on the rise throughout the world, and young children are at risk of exposure to these disease agents.¹⁰² Consequently, nature-based education raises some important questions on this subject.^{103,104} For example, the scientific literature points out that spending time in tall grasses may pose risk of contracting Lyme disease.¹⁰⁵

Wild animals

In nature-based education, the most likely contacts to occur between children and animals involves interaction with insects, amphibians, certain birds, worms, and other earth-dwelling organisms. Furthermore, children may also come into contact with faeces and excrement, animal carcasses, feathers, disgorged bird pellets, food residues, among other things. The connection between exposure to these elements and risk of young children contracting a zoonotic disease has not been well-documented.¹⁰⁶ Where the balance lies between benefits associated with contact with animals at an early age and risk of zoonotic disease has yet to be determined and is needed to help guide practice.^{107,108} Currently, the scientific literature largely recommends a cautionary approach, and warrants further investigation.



Animal-assisted therapy

To minimize the risks of zoonotic infections, it is highly recommended to implement infection-control policies and procedures aimed at managing and preventing zoonotic disease in facilities offering animal-assisted therapy or contact with animals¹⁰⁹

2.4 Safety

Accidents in nature-based education

Despite the increase in exposure to risky situations, nature-based education contexts do not appear to show a higher prevalence of incidents affecting children's health and safety.¹¹⁰ For example, in a study comparing early childhood education facilities in nature-based contexts with conventional preschools, researchers concluded that there were no differences in the incidence of illnesses or accidents.¹¹¹ Moreover, not a single serious injury was identified in either of the two environments.

However, studies report that educators often express an interest in being better prepared to deal with safety issues in natural environments.¹¹² Among the needs cited, there is particular interest in learning about strategies for preventing negative effects of cold exposure and the adoption of practices to assess the risks and the benefits associated with activities in a natural environment.¹¹³

Between safety and development

According to several scientific articles, a new approach to risk-taking in the context of children's development is needed.^{114,115,116} Authors have repeatedly recommended a reform of current policies, rules, and practices that hinder children's capacity to engage in risky play and the opportunity to develop associated skills¹¹⁷

The concept of "healthy or acceptable risk" is part of nature-based education. The emphasis is placed on the presence and relevance of risk in children's outdoor play activities, while also taking their safety into account.¹¹⁸

Engaging in risky play allows young children to try out new behaviours, and develop new skills and their independence, and thereby develop a sense of self-esteem.¹¹⁹ In nature-based educational contexts, challenges and risks contribute to children testing and pushing the limits of their physical, cognitive, and social development. It also contributes to their ability to analyze situations and to protect themselves and their peers.

Taking inspiration from several researchers and stakeholders embracing a variety of perspectives, [Child and Nature Alliance of Canada](#) (2019) developed a toolkit¹²⁰ to help managers and practitioners gain a better understanding of the health and safety risks in nature-based educational contexts and to implement a range of measures that reflect a balanced approach to risk and safety.



To conclude, these three types of reviews served to highlight key research findings on nature-based education for children’s health, development, and safety. The practices that characterize nature-based education are becoming increasingly well-defined, making it possible to facilitate and support the implementation of actions in early childhood education environments. It must, however, be acknowledged that this field of research is still in its nascency. Much work remains to be done to enhance our understanding to help guide the expansion of nature-based education in Québec.

This reference guide is based on the knowledge summarized in the above-mentioned reviews of the scientific literature, as well as other scientific publications dealing with related questions (for example, the relationships between families and ECSs) and other articles published since the reviews were conducted. The reference guide also drew inspiration from the experiences of childcare facilities in Québec that have already introduced nature-based education.



Summary* of key research findings

Nature-based education and children's development

Nature-based education **engages the whole child**, where benefits are observed in many aspects of development.

Physical and motor skills development:

- Children can push beyond their limits, including by engaging in risky play
Increased physical activity levels
- Lower incidence of hyperactivity disorders

Social and emotional development:

- Enhanced self-awareness and self-confidence
- Improved self-regulation skills
- Enhanced self-assertiveness and sense of self
- Lower incidence of conflicts with peers (enhanced prosocial behaviours) Development of empathy

Language development:

- Enhanced verbal narration skills
- Enhanced oral language skills
- Supports the emergence of early reading and writing skills

Cognitive development:

- Enhanced creativity (greater originality and imagination)
- Acquisition of new knowledge about the world
- Development of executive function skills (improved memory, improved attention)

*Summary based on the three scientific literature reviews carried out as part of the following study: Bouchard, C., Leboeuf, M., Duval, S., Lehrer, J. & Cadoret, G. (2019-2021). *Alex – éducation par la nature. Une approche innovante pour favoriser la réussite éducative des jeunes enfants*. Research project funded by the Ministère de l'Économie et de l'Innovation sociale (MEI), Université Laval, Québec, Canada.

Educators’/HECPs’ practices (what are promising practices?)

Indirect interventions

Duration: the longer children are in contact with nature, the greater the benefits

Frequency: going to the same natural site often, in different weather conditions

Criteria for choosing a site:

- Are there opportunities for free play, active play, and explorations?
- Is it a safe place?
- Are there any limitations when using the site and its materials?
- Is the site nearby and readily accessible?

Direct interventions

The site isn't everything. What makes an environment into a learning-friendly space is the facilitation and scaffolding the educator/HECP brings to the children's play and actions. The educator/

HECP assuming the role of a fellow explorer or fellow learner gives rise to joint attention and better scaffolding of the children's play and exploration.

By asking the children questions based on their interests, the educators/HECP help them to:

- Develop their thinking skills
- Make connections
- Anticipate the future

As they step in, the educators/HECPs:

- Put their trust in the environment's richness *"Letting go and accepting that the bush setting will provide the play and learning opportunities."*
- Encourage the projects initiated and carried out by the children
- Offer no or only very basic structured sessions
- Judge which moments are the most appropriate for providing learning support
Rely on their own pedagogical documentation

Health and safety issues

Young children's immersion in a natural environment and contact with nature helps combat physical and mental health problems

Physical and mental health:

- Reduction of sedentary behaviours and obesity
- Improved eye health (lower myopia incidence)
- Positive effects on the immune system
- Particularly beneficial for children with attention deficit issues
- Stress reduction and fewer behavioural problems
- Lower incidence of mental health problems in adult life

Safety:

- An increase in exposure to risky situations **does not entail** a higher prevalence or increased seriousness of health and safety incidents

Needs:

- Emphasize the presence and relevance of risk in children's outdoor play, while also taking their safety into account
- Reform current policies, rules, and practices to make room for risk-taking that supports children's development
- Inform and train the relevant actors

Implementing nature-based education: Stepping beyond the beaten track



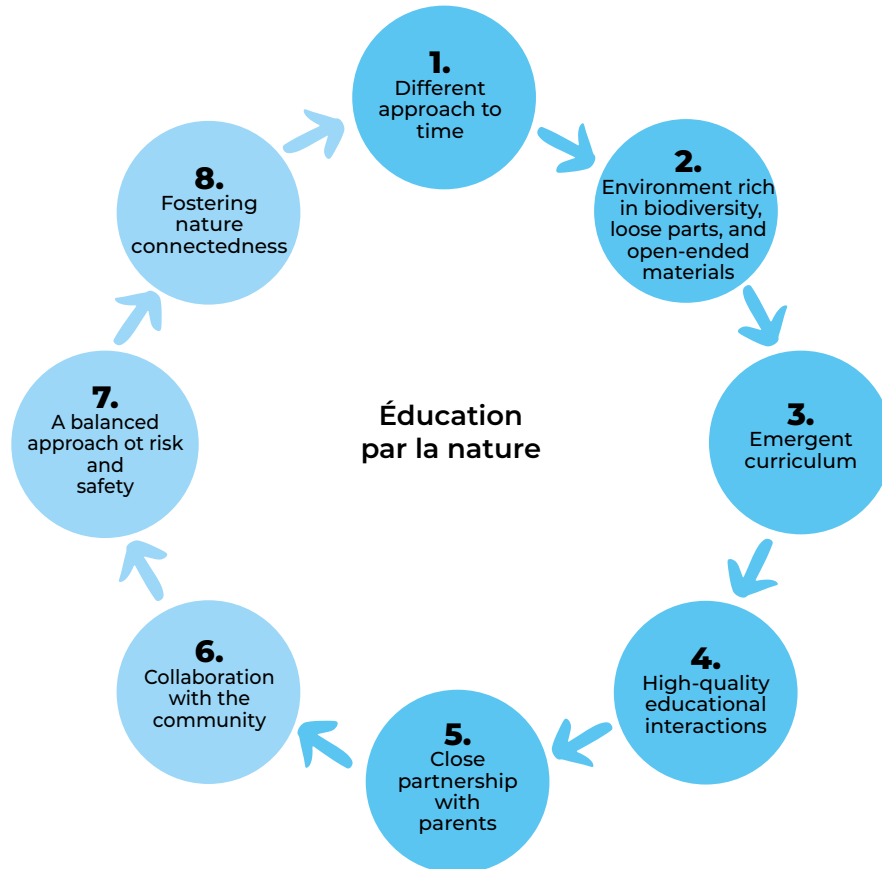
1. The eight principles of nature-based education: interrelated and interdependent

When ECSs plan to introduce nature-based education, they can take inspiration from eight guiding principles that grew out of the observations and reflections of Quebecers whose innovative practices were based on evidence-informed approaches developed throughout the world. Experts from various research fields including pedagogical psychology, early childhood development, health and safety, environmental sensitivity, and physical activity contributed to the selection of these principles.

- 1** First principle – **A different approach to time:** slowly, often, regularly, for long periods, at all times
- 2** Second principle – **An environment rich in biodiversity, loose parts, and open-ended materials:** fertile ground for exploring, learning, and putting down roots
- 3** Third principle – **Emergent curriculum centred on exploration and play:** recognizing children as competent and holistic
- 4** Fourth principle – **High-quality educational interactions:** enhancing children’s experience
- 5** Fifth principle – **A close partnership with parents:** acknowledging, discussing, sharing power, valuing diversity, networking
- 6** Sixième principe – **Une collaboration étroite avec la communauté :** placer l’enfant au cœur d’un projet communautaire
- 7** Seventh principle – **A balanced approach to risk and safety:** enhancing the role of appropriate risk-taking
- 8** Eighth principle – **Fostering nature connectedness:** encouraging a rewarding relationship with nature

The eight principles, shown in Figure 5, represent the foundations or pillars of the approach. Each one plays an important role within the comprehensive model. Although the principles need not be followed in the given order, their presentation below does reflect the sequencing in which they frequently find application in ECSs embarking on a nature-based education venture.

Fig. 5 The eight principles of nature-based education: interrelated and interdependent



For example, ECSs usually begin by examining their relationship with time (Principle 1), concerning such aspects as the duration and frequency of activities, the flexibility of scheduling, and how adverse weather conditions are viewed. Next, they tend to think about the kind of environment the children ought to be offered, and available materials (Principle 2). These first two principles are often considered concurrently. The following two principles focus more specifically on education: emergent curriculum (Principle 3) and quality of the interactions (Principle 4). While principles 3 and 4 aren't unique to nature-based education, the fact that they are paired with a different approach to time and offer an environment rich in natural elements creates an excellent context for transitioning towards emergent curriculum and high-quality interactions.

Partnering with parents (Principle 5) and collaboration with the community (Principle 6) serve to consolidate the social fabric that supports children and the ECS's nature-based education project. Part of a consensual dynamic involving parents and the community, the scaling up of appropriate risks within a balanced approach to safety and risk (Principle 7) offers a constructive way to deal with safety issues.

And finally, the fostering of nature connectedness (Principle 8) centers the natural environment and biodiversity as part of children’s development, while also addressing contemporary ecological issues.

Nevertheless, the eight principles are interrelated and need not necessarily be considered in the same order as they appear here. As is the case with a forest, there isn’t just one single point of entry into nature-based education. Multiple access routes are possible! Each organization must set its priorities based on its own specific baseline situation, strengths, characteristics, and limitations.

The eight principles of nature-based education constitute the core concepts of this reference guide. Each of the principles will be covered in greater detail in the following chapters.

2. The nature-based education continuum

Putting in place nature-based education is a process. Using the analogy of an eight-lane road, the ECS may progress along each of the lanes, albeit at different paces for each of the eight principles. That is what is called the multifaceted nature-based education continuum.

Figure 6 shows how the continuum for the second principle can range from an environment offering children no contact with nature to one where the children are completely immersed in a natural setting. Further continuums may be created for each of the principles. This is particularly true for the educational approach used to support learning, ranging from structured activities delivered by the adult to emergent curriculum.

Fig. 6 The second principle of the nature-based education continuum



The ECS may determine its position in the nature-based education continuum by identifying its starting point for each of the principles. To do this, it can refer to the self-assessment tool presented below in Section 3.2., and then, depending on its situation, aspirations, and limitations, the ECS can decide on the next steps to take.

3. A collective, gradual implementation process

All efforts connected to educational quality and the introduction of new practices are subject to a process, where it is recommended that such a process include ongoing quality improvement. The various stages of observing/analyzing the starting point, prioritizing and planning, executing chosen actions, and assessing outcomes follow one after the other, in cyclical fashion.

To help make it easier for the ECS/HECP's management and leaders to navigate these different stages, we have put together some tips to consider when implementing nature-based education.

3.1 Raise awareness and mobilize all actors

The experiences of the different groups involved in the Alex project have shown that the challenges associated with implementing nature-based education are more readily resolved with a plurality of actors: as a team, with support, and together with families and community actors. Everyone can contribute to the effort, including the individuals responsible for food services.

To help ensure smooth planning of the different stages and maintain engagement among stakeholders, it may be a good idea to start with the appointment of a few leadership figures from the ranks of the educators, managers, pedagogical leaders, HECPs, CO staff, involved.

To raise awareness among the team and HECPs, the following may be beneficial: training sessions and information exchange workshops on the subject, sharing of photos and videos documenting concrete experiences, reading circles, and visits to childcare facilities where nature-based education is already an established practice. This reference guide can serve as an invaluable tool for this stage in the process, not least because it can be explored and thoroughly examined one chapter at a time.

With the support of their designated leader, the HECPs and educators can take charge of the awareness-raising efforts with the families and the community, mobilizing them to play an active part in making nature-based education a reality. Just like a campfire may die down if nobody ensures it is well-supplied with fuel and protected from wind and rain, the initial and on-going mobilization is of crucial importance for the successful implementation of the nature-based education project.





3.2 Determining your position in the nature-based education continuum (observation and prioritization stage)

Before taking the leap into new programming, it is necessary to determine the ECS's starting point and available options. A [self-assessment tool](#) is available to help facilitate this process of positioning the ECS's existing practices on the nature-based education continuum. It involves answering a set of questions. The answers will generate a diagram representing each of the eight principles of nature-based education. The diagram illustrates where the ECS is positioned in terms of the key elements to be implemented in connection with the principle. While this exercise is useful for determining a starting point, it can be performed again and again to help reposition the ECS over time. The self-assessment tool makes it possible to:

- Sketch an outline of the ECS's implementation of nature-based education Determine the ECS's position on the nature-based education continuum
- Identify priorities
- Identify the goal and what strategies to implement
- Evaluate the program over time

It should be noted that it is up to each ECS to determine its own goals acknowledging its limitations, values, and aspirations. While nature-based education encompasses eight interrelated principles, each one requires particular attention. As such, it is advisable to set priorities.

3.3 Priorities and planning (prioritization and planning stage)

While analyzing its position on the continuum, the ECS can set its priorities and thereby establish a blueprint for developing an action plan or timeline. These planning tools are useful for defining goals, identifying actions to implement, highlighting resource requirements, identifying the individuals in charge, and determining a work schedule. These elements make it possible to anticipate the various phases in the process and spread the entire process over a realistic timeframe with due consideration to any possible setbacks or unforeseen problems.



Please refer to the action plan and timeline templates in Part 3 on pages [247](#) and [248](#)

The planning and creation of a continuum of knowledge transfer and knowledge application activities (observations, reflections, discussions, coaching, mentoring, training sessions, etc.) for professionals constitutes an important foundation for the action plan and helps ensure the long-term viability of the nature-based education approach.

A word of caution: Avoid the temptation of trying to accomplish too much too soon! A fast pace can result in the approach being abandoned, as it may be deemed too complex or too energy-intensive by the stakeholders. That is why it is so important to progress gradually. The “different approach to time” principle of nature-based education is helpful to guide a slow but successful implementation process.

3.4 Trial-and-error (action implementation and assessment stages)

The trial-and-error phase makes it possible to identify what works well in the environment or specific context, including the realities associated with a group or context. Experimenting in this way helps identify the educators’/HECPs’ need for knowledge transfer, knowledge application, and support. This stage calls for regular monitoring and follow-up. Specific adjustments and evolving strategies will be necessary as the seasons and group needs change.

Moreover, to ensure the project and process are adequately assessed, the ECS should record the findings from monitoring and follow-up activities: progression of change, successes, challenges, benefits, etc.

Quieter moments (if any) are a good time for carrying out a review and celebrating the progress achieved by the ECS. The self-assessment tool introduced above in Section 3.2 is recommended to support this exercise along with the questions for reflection listed in the summary evaluation template.



Please refer to the summary evaluation template in Part 3 on p. [249](#)



4. Educators’/HECPs’ professional development support

To support changes in practice in order to align with nature-based education, a member of the management team or of the coordinating office must provide support and monitor knowledge transfer and program implementation. The monitoring task involves making sure that all individuals involved in the same environment demonstrate consistency, share an understanding of the concepts, and their implementation. This monitoring contributes to improving the ECS’s educational quality. This also enables the pedagogical leaders to identify any difficulties the educators/HECPs may be experiencing, plan how to support educators/HECPs, and carry out necessary adjustments.

Several elements of nature-based education will already be reflected in existing practices of some ECSs, in which case the educators/HECPs may need support in recognizing these linkages to avoid “starting from scratch.” Doing away with beneficial elements already in place could give rise to the perception that establishing nature-based education is an impossible task.

Various other issues may also require the leaders’ attention and follow-up: substitute educators, who may be less familiar with the approach; the consistency of practices within one and the same team; the fragmentation of approaches or linkages with different approaches within the same ECS; certain individuals’ reluctance, etc.

Suggested support practices to address these challenges

- Encourage education staff to support the action plan
- Clearly establish which elements should be subject to follow-up or support and who will be in charge of carrying out these tasks
- Maintain a record of new efforts that have been carried out, the successful and less successful aspects, the benefits, etc.
- Adjust or expand on structuring measures so that all practices are consistent with nature-based education irrespective of the staff in place
- Share responsibilities between leaders and members of the team or within the HECP
- Ensure regular follow-up with the educators/HECPs in the form of individual, group and sub-group meetings. Pedagogical leaders should be well prepared to contribute to and lead meetings focused on educational components of the program. If necessary, they should seek support
- Ensure champions of the program are present at the site to observe, model, support, etc.
- Focus on teamwork, reflective practice, and professional development, all of which underpin educators’/HECPs’ ability to examine their own practice and remain open-minded as they look for solutions and improve their practices



Please refer to the problem-based learning process in Part 3 on p. [251](#), a recommended technique to support reflective practice.

5. Structuring measures that foster the long-term viability of the practices

Structuring measures maintain, support, and sustain nature-based education to help secure the long-term viability of this approach in the education sector.

(...) structuring measures encourage the long-term viability of a practice. They help ensure the practice's stability and uniformity over the years, irrespective of the education staff in place. Structuring measures guarantee the consistency of educational interventions. They support, orient, and guide the education staff's work and environment. As such, educational practice becomes rooted in the community's mission, values, and realities¹²⁷

Listed below are examples of structuring measures that help underpin the implementation of nature-based education:

- Have the Board of Directors adopt a resolution in support of the ECS's commitment to implement nature-based education
- Obtain the parents' agreement—or consent—as part of the service agreement Develop a nature-based education action or implementation plan
- Develop a timeline
- Promote individual and collective follow-up with education staff members
- Introduce staff recruitment strategies and tools: when recruiting and hiring, make your commitment to nature-based education explicit and visible
- Establish benchmarks governing the purchase of nature-based education-specific equipment

Each of the following chapters includes a list of suggested structuring measures to help with the relevant principle's implementation.





02

Into the
heart of
nature-based
education



REFERENCE GUIDE

Nature-based early childhood
education

First principle: A different approach to time

Slowly, often, regularly, for long periods, at all times



Little by little Émilie introduced nature-based education to the children in her family-based childcare centre. She started by welcoming the children in her backyard in the morning. As a next step, they had their snack and lunch breaks in the backyard. Then they began to systematically go outside at the end of the day to wait for their parents. Time went by more slowly in the backyard, as everyone could play at their own pace and let themselves be guided by their inspirations.

Based on this positive experience, Émilie began to reassess the layout of her backyard so she could get better use out of it, even during winter. She added a shed with a living roof, plants, logs, tires, as well as windbreaks, and a mud kitchen. As they became more accustomed to the different weather conditions, the children and Émilie began to explore the neighbourhood for small areas of nature: vacant lots, a few green back alleys, and even a large wooded area.

That is how the idea came about to spend time in the nearby wooded area. Some days were rainy, cold, or filled with doubt. Nevertheless, every time, Émilie, the parents, and the kids found a solution: an easy-to-transport shelter, a buggy, weather-appropriate clothing, etc. The process of familiarization with nature was a gradual one. One day a week to begin with, then two, and eventually almost daily—to the great delight of everyone!



1. Why adopt a different approach to time?

1.1 For the children

Time is an invaluable ally for children’s development, as they have a major need to explore their environment and develop more complex forms of play, to marvel and reflect, strengthen their learning, and develop their skills. The first principle of nature-based education encourages a new approach to time, emphasizing the extent to which the pace, frequency, and duration of the different periods of play and routines are crucial to determining the quality of an educational environment. This perspective is consistent with respecting the uniqueness of each child, as advocated in Québec’s Accueillir la petite enfance education program, which stipulates the importance of “...respecting children’s individual developmental pace so that they may thoroughly explore and experiment with the things that interest them.”¹²²

The different parameters of time—pacing, frequency, regularity, duration—as well as weather conditions represent the variables ECSs can work with to allow children and adults to enjoy all the advantages of nature-based education. Various recent research projects have focused on this topic.

An Australian study of 490 children aged 2 to 5¹²³ investigated the quality of interactions amongst children in indoor and outdoor environments, the length of time spent outdoors, as well as the degree of flexibility within the schedule. The results of the study indicate a positive relationship between a flexible schedule and the quality of interactions in the following three domains: emotional support, classroom organization, and instructional support.

The same study indicated a positive relationship between time spent outdoors on a daily basis and the quality of interactions within the group in the following dimensions: teacher sensitivity, regard for student perspectives, behavior management, instructional learning formats and concept development.

This raises two questions:

- 1) When spending time outdoors, is there an optimum duration?
- 2) If children spend extended periods of time outdoors, do they miss out on learning experiences that are essential for their development?



A Québec-Norwegian longitudinal study followed 562 children aged 4 to 7¹²⁴ to see whether the number of hours spent outdoors (annual average of 1 to 9 h/day) influences cognitive and socio-emotional development. The results speak for themselves: The more time children spent outdoors on a regular basis, the higher they scored in assessments of cognitive skills. More time spent outdoors was also associated with fewer incidences of attention deficit and hyperactivity disorders.

Rare are the childcare facilities in Québec that can offer children the possibility to be outdoors for up to nine hours every day, throughout the year. Nevertheless, the outcomes from these studies, which highlight the **importance of spending frequent and extended periods of time outdoors at all times of the year** may serve to inspire ECSs to follow suit.

« When they are in the woods, they play, chat, laugh, and invent new games. (...) Sometimes, some children lie down on the ground, simply because they feel like watching the clouds go by. (...) I observe more creativity; more time to be creative, to structure, and to complete their experience. »^u



1.2 For the adults

A new approach to time may also address educators'/HECPs' psychological and professional needs. Common work complaints among educators/HECPs surround feelings of being stressed and overworked, due to the scale and/or quantity of responsibilities. In contrast, many educators/HECPs who experienced nature-based education as part of the Alex project reported a sense of calm ("a great sense of relief!"). They felt more available and receptive to children's experiences. Another thing they reported is the reengagement with their calling, to ensure children's well-being and help facilitate their development.

^u An educator who participated in the Alex—Éducation par la nature project

« In our forest, time seems to stand still. We don't keep checking our watches. We aren't as limited in terms of needing to tidy up, and there is very little need for negative interventions. We have more time to be truly available and present for the children. Everything is easier, sometimes I find it hard to believe that we get to enjoy this privilege of experiencing these moments with the children.»¹²⁵



2. How does one adopt a different approach to time?

2.1 Slow down, be flexible, and respect children's individual pace

Nature-based education reflects the importance of reducing the pressure associated with a busy schedule and performance expectations. Motivated by a concern for effectiveness and thoroughness, many educators/HECPs tend to organize the day's schedule by packing it with a series of educational activities. Often these activities are carried out in a rigid manner, directing the children's actions rather than allowing them the place and time to play, think, observe, understand, and learn. However, organizing time in a way that imposes a brisk pace controlled by the adult can have negative effects on young children:

« Children, including toddlers, react in a predictable manner when their time is limited. They quickly learn not to begin doing anything, as they are aware that the adult will instruct them to stop doing what they are busy with in order to begin another task that is deemed more important than their own. This "stop/go ahead" routine obstructs the children's commitment, concentration, and participation »^v

Emphasizing flexibility does not mean that you should do away with schedules altogether. Schedules can offer structure, which is reassuring to children. By analyzing their own scheduling practices, educators/HECPs can make sure they adjust to the children's needs, initiatives, and pace, while also maintaining a certain measure of predictability.

^v An educator who experienced the Alex—Éducation par la nature project



Suggestions for slowing down time, being flexible, and respecting children’s individual pace

Adopt a flexible schedule

- Adjust the schedule according to the children’s needs and interests:
 - Discuss the schedule with the children: When and where do they want to stop so they can look at an interesting book? What type of play/exploration do they want to do? Do they want to continue the activity after the snack break? What interests them?
 - Assess the children’s biological needs: hunger, fatigue, feeling too hot/cold, energy expenditure, sleep, etc. Use these as reference points
 - Allow yourself to let go! “As soon as your shoulders begin to relax a little, you get a sense of time slowing down...”

Plan the organizational aspects

- Educators’ working hours can be reorganized to help underpin this flexibility. Or consider a collective reflection on how to best manage break times so they don’t obstruct time spent in nature or disrupt the unfolding of lived moments.
- Regular routines, meals, snacks, and naps can also be conducted slowly:
 - Establish individualized or open-ended routines, such as a self-serve routine or the option of one of two set times for serving meals
 - Remain attentive to signs of the children getting hungry so you can decide on an appropriate time for the snack
 - Discuss the material logistics and the schedule with the team and the person responsible for the food
- Concerning health needs, natural environments offer many possible options.



Please refer to the technical information sheets on food, outdoor naps, and sanitary requirements in Part 3, on p. [238](#), [240](#) and [242](#)

And finally, as is true of all new environments, everyone will need some time, especially in the beginning, to become familiar with the environment around them. Exploration will be an ever-present element during the first outdoor outings, after which more complex play will gradually take shape. It is essential to adjust to the group's level of comfort with being in a natural setting. Some children will have never set foot in a natural environment, while others may be used to visiting natural environments with their families. As such, slow and flexible are the key concepts for accommodating the pace of each and every child.

« At first, we urged the children to get dressed and ready to go as quickly as possible. Even while the children were walking the short distance to the base camp, we hurried them along so that we could spend as much time as possible in the woods. For some of the children, all this rushing spoiled their entire morning. Now we take our time. Even if we leave 10 or 15 minutes late, it doesn't matter. The path leading to the base camp is part of the experience, as it is a source of pleasure, learning, and discoveries. Ever since, our outing in the woods have become more enjoyable for everyone, children and educators alike! »^w

2.2 Spend time in nature regularly and often

The greatest benefits of nature can be reaped when you return to the natural environment **often** and are **often** in contact with natural elements. At first, children familiarize themselves with this new environment and the loose and open-ended materials found there. They can then push their play and explorations further, as they express their creativity and undertake longer-lasting projects. Returning often to the same site enables children to sense the passing of time, as they become aware of the subtle changes taking place through the seasons, and of shifting weather or other dramatic changes, such as melting snow and budding trees, high tide, shoreline erosion, migrating birds, etc.



^w An educator who experienced the Alex—Éducation par la nature project

Regular sessions in a natural environment become predictable, which helps the children and adults anticipate and prepare for them. Parents know when to bring along a specific item of clothing, children can plan their play and projects, and educators/HECPs can prepare accordingly.

When activities in a natural setting are frequent, regular, and extended, children become more accustomed to their environment. They can explore their surroundings, the materials and what possibilities they offer. This enables them to commit to memory their experiences in the natural setting and to remember their play and projects from one visit to the next.



Suggestions for how to increase the frequency and regularity of the sessions in nature

- Establish regular and predictable times for activities in natural spaces
- Adjust the frequency of visits according to the needs of each group: the children's age, lifestyle habits, special needs, autonomy of movement, etc.
- Share a calendar with families indicating the outings in nature
- Increase the frequency gradually. Begin with occasional outdoor sessions, then increase them to a monthly and then weekly frequency
- Initially go to natural spaces located near the ECS
- Plan solutions ahead of time to deal with specific situations: a sick child, a child needing to leave early or arrive late, etc.
- Ensure that all team members develop the necessary knowledge and degree of comfort for going on outings in the natural environment to avoid any interruptions associated with staff rotations or absences

« Two groups of children experience forest immersion sessions twice weekly throughout the year. When the summer comes, the other groups of children enter into the picture as well, visiting the woods at least once every week. This gives all the children and educators a chance to enjoy this environment, while at the same time benefiting from the experiences of the more experienced children and educators. The pedagogical leader also spends a lot of time in the woods to provide support to the educators. »^x

^xAn educator who experienced the Alex—Éducation par la nature project



2.3 Spending long periods of time in the natural environment and in play situations

The length of time spent in natural environments influences the potential benefits. The longer young children spend in a natural setting, the greater the benefits they derive for their development, physical and mental health, immune system, the fostering of their nature connectedness, etc. (for more detailed information, please consult the chapter outlining key research findings on p. 20). Many educational facilities in Québec reserve entire days or half-days to be spent in a natural environment.

As these moments spent outdoors in a natural environment become longer, one can observe the emergence of a sense of comfort and well-being among the children and adults. The children overcome their initial limitations, discover the range of possibilities, and deepen their involvement in play and learning. Step by step, they develop the ability to elaborate

their play and add complexity for periods of time that may extend to more than 60 to 90 minutes. The adults, for their part, gradually become more comfortable and strengthen their bearings in these new places, just as they would in a new neighbourhood.

Suggestions for extending the time spent outdoors in a natural environment

Extending the duration of play periods and moments outdoors in a natural environment can be done gradually so that the children and adults become more familiar with the new environment. There are several possible ways to do this:

- Spend the very first part or the end of the day outside, in the yard, or, occasionally, in a natural environment, as long as you make sure you have the parents' permission
- Eat snacks in the yard or in a natural environment, and, eventually, lunch as well Anticipate hygiene requirements and the need for sanitary facilities
- Have naps in the yard or in a natural environment
- Ensure the right kind of clothing: Getting wet or feeling cold will make the children want to return home!





- Reconsider certain play situations so they can be adapted to natural environments: reading or interactive story-telling, visual arts/land art, sets of rules (hide-and-seek, tag), etc.
- Make sure there is consistency and the possibility for extensions between the experiences in the natural settings and the options offered in the ECS's indoor facilities
- The adults should progress at their own pace as well!
- Please refer to the technical information sheets about food, outdoor naps, sanitary requirements, and clothing in Part 3, on p. 238, 240 and 242



To enhance your understanding, please complete the exercise on p. [197](#)

2.4 Make the most of all weather conditions

As stipulated in Québec's [Educational Childcare Regulation](#), Section 114, all ECSs must, "unless prevented from doing so by inclement weather, [...] ensure that the children are taken outdoors every day"¹²⁶. As the concept of inclement weather is vague, it is appropriate that the ECS establish its own definition. Nature-based education advocates will often perceive different weather conditions as opportunities for learning, discovery, and pleasure.

When immersed in the elements, children may develop resiliency and forge a bond with the natural world. They have opportunities to feel strong and show solidarity with other living beings. Moreover, different weather conditions expose children to new sensations. The odours, sounds, textures, and colours are different. Rain means earthworms and vibrant greenery; snow means muffled sounds and dazzling whiteness; cold means frost, ice crystals, and light; wind means swaying plant life and powerful soundscapes ...

Considering these sensory experiences, anyone who provides children the opportunity to immerse themselves in the elements help support a rich sense of wonder. This resource is available for the taking—why not make the most of it!

« During our first activities in heavy rain, we put up a tarp to protect the children and enable them to play in a dry area. To our great surprise, not one of the children sought out the shelter! They spent the whole morning pretending to be fishing in the small stream. »^y

^y An educator who experienced the Alex—Éducation par la nature project

Suggestions for dealing with all weather conditions

- Make sure you have the right kind of clothing. The saying “There is no such thing as poor weather, only poor choice of clothing!” is always—or nearly always—right.
- Have the appropriate equipment on hand to protect, warm up, or change, if needed: a change of clothes, tarps, a shelter, etc.
- Make a calendar listing the schedule of activities. Let parents know that these will take place rain or shine.
- Be open to the possible concerns voiced by parents in connection with playing outdoors in rainy or cold weather. Discuss with them the best possible way to proceed.
- Talk to parents and staff about certain myths, such as that cold weather causes colds.¹²⁷
- Ironically... take the time to try out different things and discuss them with your team, the children, and parents. Bear in mind that reaching one’s comfort zone and beginning to enjoy the outdoors is a gradual process.
- Set benchmarks^Z (Who? When? Where? How?) for dealing with extreme weather conditions: very low temperatures and windchill; very high temperatures and humidity levels; winds exceeding 60–70 km/h; extended periods of heavy rain in cold weather (below 5°C); lighting storms, blizzards, and hailstorms.



3. Structuring measures to support the implementation of a different approach to time

A range of different measures may be used to ensure that a different approach to time is incorporated into all aspects of the ECS:

- Include statements about the ECS's approach to time in its **education program**.
- Reassess your **educational planning** tools and strategies to make sure they are appropriate to the children's pace.
- Examine the ECS's **schedule for a single day** and make any necessary adjustments to better respect the children's pace and to maximize the time they spend in natural or naturalized environments:
 - Welcome/head outdoors
 - Flexible snack routines
 - Etc.
 - Meal outdoors
 - Nap outdoors
 - Head outdoors before/after nap
- Develop a **calendar listing the scheduled activities** in nature and share it with the parents.
- Make any necessary changes to the **staff schedule** (start, finish, breaks) to facilitate activities in the natural environment and to make it possible to stay outdoors for longer periods of time.
- Establish procedures to make sure you have the appropriate clothing and equipment on hand for all seasons and weather conditions.
- Establish **clear benchmarks** for dealing with extreme weather conditions.
- Make sure **to support and follow up with** the education staff concerning their comfort level with spending time outdoors in all weather conditions.



First principle: A different approach to time

Key characteristics

- **Slowly:** a flexible daily schedule that may be adapted according to the children's interests, initiatives, and any opportunities that crop up.
- **Often:** frequent, even daily, activities in a natural environment or a naturalized playground, as often as possible.
- **Regularly:** a calendar listing scheduled outdoor activities, shared with parents and children.
- **For long periods:** extended sessions in a natural environment or a naturalized playground, as often as possible.
- **At all times:** time spent outdoors takes place in all weather conditions and in all seasons, except in extreme conditions.

How do each of these characteristics find expression in your educational childcare facility? Determine the position of your SGE in relation to the first principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstance will be generated.

Second principle: An environment rich in biodiversity, loose parts, and open-ended materials

Fertile ground for exploring, putting down roots, and learning

When Mamadou and his parents set foot in the CPE for the first time, they were impressed with the natural elements they found there. Sitting on an enormous branch stretching from the floor to the ceiling were figurines representing the various animals inhabiting the environment near the CPE. The furniture in the room was made of wood, and there were photographs, books, drawings, and play equipment—the natural world was everywhere.

A little further down stood a display stand holding several baskets. A sign above one of them read: Calling on all families! Please share the following materials with us: buttons, corks, wooden sticks, different coloured samples of materials-, etc. And finally, the hallways and changing rooms were decorated with many photographs showing children in contact with nature, inside the rooms, in the yards, and even in the woods!

The educator gave Mamadou and his parents a tour of the facilities. She explained the CPE's orientation concerning the choice of loose parts and open-ended materials. And then, the highlight of their visit, they went into the centre of a small forest located near the CPE, where some children and their educators were enjoying themselves.



1. Why so much emphasis on the children's environment and its material abundance?

In keeping with the structural dimensions underpinning the quality of early childhood education, the second principle of nature-based education highlights the significance of the environmental setting and the materials available to young children. The environment in which the children play and the materials available to them convey meaning, influence their play and therefore also their learning. They inspire, tell stories, and reflect a vision of the world. They are the primary sources that enable young children to explore, put down roots, and learn.

Given the current context of the ecological crisis, there is a great deal of interest in the relationship that young children build with the environment in which they develop. When interacting with the environment, loose-parts and open-ended materials, young children may make use of all their senses, which is something that can affect their life trajectory. If they develop in spaces where manufactured goods predominate, they may internalize a perspective of the world where humans shape and control their environment. If, on the other hand, their environment is largely composed of the natural world, including living as well as non-living elements, the children may gradually develop a connection with nature and forge a bond with their ecosystem.

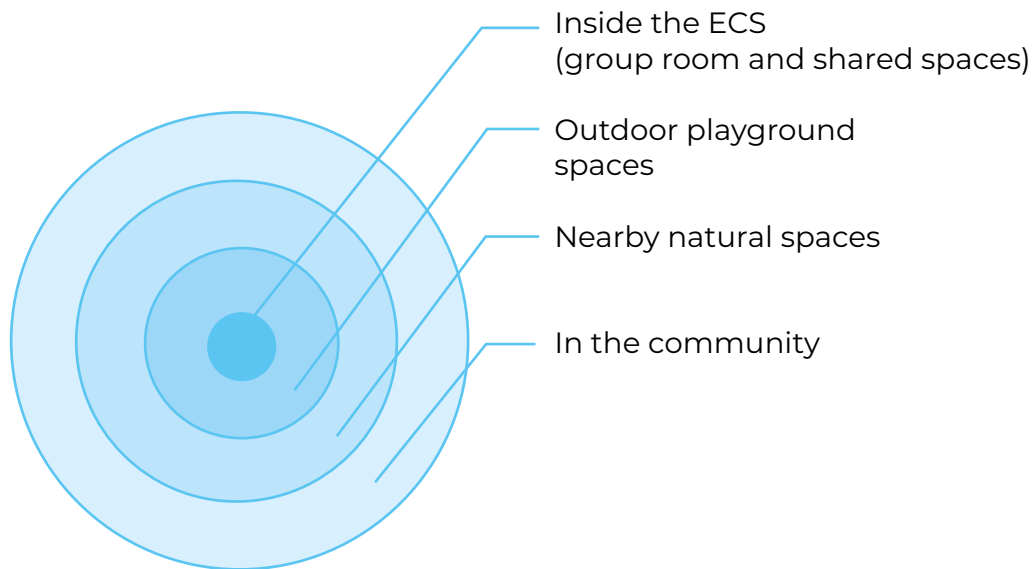
Furthermore, the positive correlation between contact with nature and children's mental and physical health and overall development (for more information, please consult the chapter outlining the key research findings on p. 20) provides rationale for supporting initiatives that aim to enhance children's access to natural environments. This is especially important for children living in comparatively underserved contexts, such as neighbourhoods and areas that lack green spaces or are run down, or for those whose families don't regularly spend time in natural environments.



2. How does one offer environments that are rich in biodiversity, loose parts, and open-ended materials?

By making natural or naturalized spaces available! To help ECSs progress within the nature-based education continuum (please refer to the chapter, *Implementing nature-based education: Stepping beyond the beaten track*, Section 2), they are encouraged to identify potential natural environments at their disposal. There are countless possibilities, making it possible to designate more than just one space. As illustrated in Figure 7, this may include indoor spaces, outdoor playgrounds, natural spaces situated near the ECS, or even options within your community that may be less obvious such as fields, alleyways, vacant land, public spaces, workshops, and stockrooms, etc. The goal is to ensure continuity and consistency with the different indoor and outdoor living environments so that children may benefit from optimum contact and involvement with nature. Here are the types of questions you may want to ask yourself: How is biodiversity associated with the natural environment reflected in your facility's indoor or outdoor spaces? How can the experiences in the natural environment be extended indoors or in the outdoor spaces and vice versa? How can the practices associated with purchasing of supplies and materials be made compatible with a comprehensive ecological vision?

Fig. 7 The four living environments that offer contact with nature

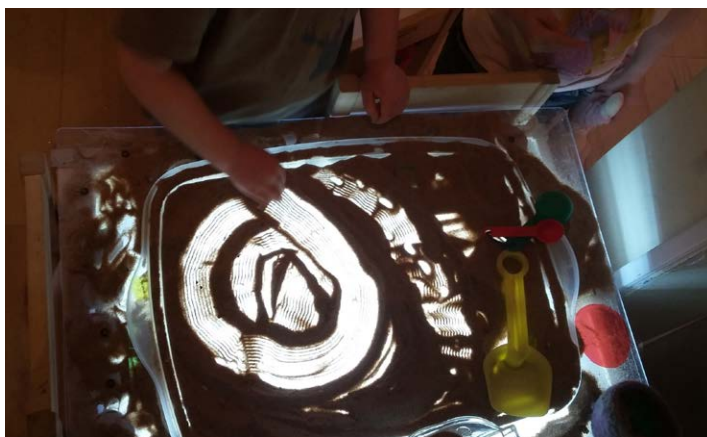




2.1 Naturalized indoor spaces

Nature can be introduced virtually everywhere: in rooms, hallways, transitional spaces, etc. The possibilities are endless, as long as you keep in mind certain safety considerations. The following are some considerations and examples for naturalizing indoor spaces:

- Non-poisonous plants of various heights
- A herb-growing space, a miniature vegetable garden, edible plants A rock and plant terrarium
- Photographs or drawings of animal and plant species inhabiting the area around the ECS, as well as in the same geographic area
- Maps of the area for noting down where these species can be found
- A designated area or buckets containing sand and water, clay or mud
- Boards or notebooks for writing down questions, observations, discoveries
- Loose parts and open-ended materials, either obtained from nature or recycled, in the different play areas





- Materials that stimulate exploration and experiences: magnifying glasses, microscopes, natural items, an incubator, well-preserved sterilized nests, shells, pieces of bark, rocks

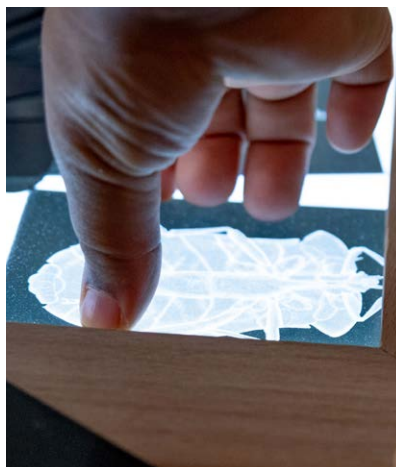
Mobiles or hanging containers featuring natural items, etc.

A light table or projector for exploring the properties of light and different materials

Works of fiction, documentaries, identification guides featuring local flora and fauna and ecosystems

Recordings of the songs of birds found nearby, the calls of amphibians, the vocalized sounds of mammals, etc.

Windows that allow for the observation of bat houses, bird feeders, or bird baths positioned along the outer limits of the outdoor play area^{aa}



^{aa} Pour éviter que les enfants soient en contact avec certains allergènes ou concentrations d'excréments

« That little log over there became a rocket, a fire engine, a car... A slide, anything one could possibly imagine, anything! A bed, a fountain... »^{bb}

Loose parts and open-ended materials should be prioritized, especially those found in abundance in natural environments, for example branches, pebbles, soil, water, sand, leaves, etc.

These materials, which the children may combine, move, and transform according to their imaginations, are particularly conducive to resolving problems and developing complex sociodramatic play, and provide a wealth of learning opportunities.^{128_129_130}



To find out more, please refer to the technical information sheet on loose parts and open-ended materials in Part 3 on p. [230](#)

Furthermore, the rooms and transition areas (changing rooms, hallways, motor skills room, reception area, etc.) can be arranged to reflect the children's everyday experiences in nature. To do this, educators/HECPs can use the walls, bulletin boards, or furniture surfaces to display photographs, anecdotes, first-person accounts, collected objects used in show-and-tell activities, etc.

« At our CPE, photographs of children in action in our urban forest are displayed on the walls of the changing room. The children are proud to show them to their parents and explain their discoveries. »^{cc}

Some things should be kept in mind when naturalizing indoor living spaces. For example, displays should be regularly updated to reflect the evolution of the children's experiences over time, while avoiding visual overload, and maintaining the children's and the parents' interest. At the same time, it is also important to check whether the materials are safe and age-appropriate for the children. In the case of infants, for example, all objects liable to generate small parts, such as pinecones that may fall apart, should be avoided. Another thing to watch out for is whether the materials made available to the children pose any hygiene risks: clean and disinfect objects made of wood with soap and water, or use a disinfectant, if necessary; quarantine any objects that are more difficult to clean, etc.



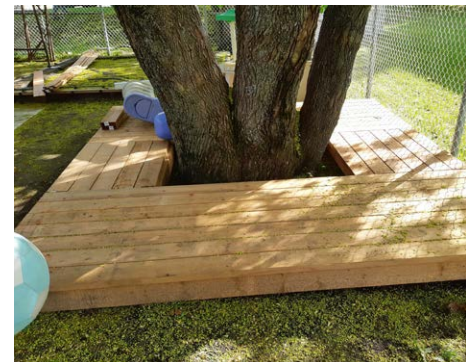
^{bb} An educator who participated in the Alex—Éducation par la nature project

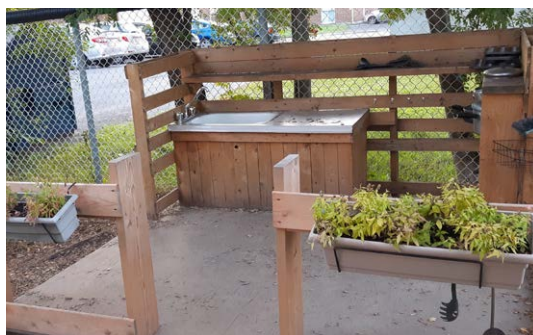
^{cc} An educator with first-hand experience of nature-based education as part of the Alex project

2.2 Naturalized outdoor play spaces: when nature reclaims its rights on the playground!

The *Educational Childcare Act* stipulates that all childcare facilities in Québec must have an outdoor play area that meets certain requirements: a minimum surface area, fencing, and fixed play equipment that meets CSA standards. Above and beyond these parameters, the play area's set-up is left to the discretion of each childcare facility, on condition that they meet safety requirements and comply with all municipal and other regulations. Whereas fixed playground equipment and synthetic flooring have long been popular, the naturalization of playground spaces is a more recent trend.

Compared with traditional playgrounds featuring standard equipment, naturalized play areas encourage a greater intensity and variety of physical activities among young children (please refer to Section 1.1.2 in the chapter outlining the key research findings, on p. 27). Children are drawn to interact with the natural, living world. They may become more involved in their play and explorations in a naturalized play space, where slopes, terraces, logs, plants, branches, rocks, water, and sand are prevalent. In addition to their intrinsic educational value, trees and other plant life provide shade, cooler temperatures, and privacy. They also encourage the presence of a variety of small animals.





Suggestions for naturalizing outdoor play areas, above and beyond adding loose parts and open-ended materials

- Rediscover the splendour of natural surface coverings: sand, rocks, pebbles, dirt floors, ground cover, wood, stones, gravel, etc. These materials offer the advantage of promoting drainage and providing a variety of sensory experiences. For example, they give way to pools of water or mud holes in the spring or following heavy rainfalls.
- Plant a vegetable garden in a specific corner of the play area with nearby access to water. You may also want to consider planting edible crops in various places, such as fruit-bearing shrubs, for example. The vegetable garden can be planted in raised containers, pots, or garden beds. If surface area is an issue, one possible solution is to make use of vertical surfaces (walls, fences, posts, trellises, etc.) that can be used to support various climbing plants. This solution preserves the ground area for the children's play and movements. Another advantage is that it largely eliminates the problem of the plants getting trampled underfoot.
- Create a large area devoted to loose parts and open-ended materials. Make sure to have an assortment of small and large items on hand.

« At our CPE, every season we add recycled natural materials to the outdoor play area, such as pumpkins in the fall, Christmas trees in the winter. The children may handle and move them to their hearts' content »^{dd}



^{dd} An educator with first-hand experience of the Alex—Éducation par la nature project



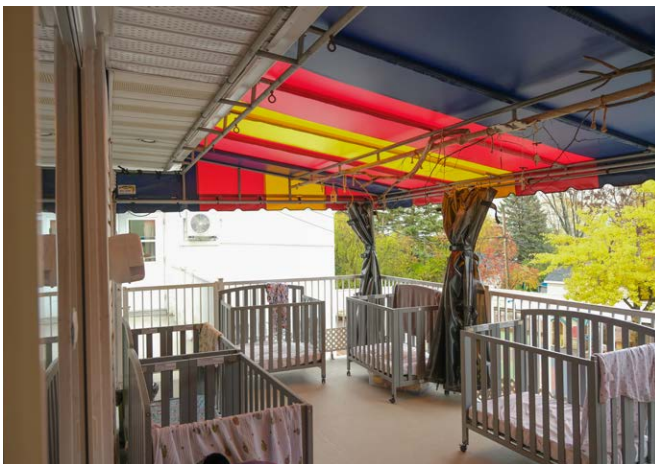
- Set up an insect hotel, chicken coop, or bird feeders along the play area's outer boundary, or in other areas used for attracting animals. Certain projects may be carried out in the play area during the warmer times of year or when time-appropriate, such as worm composting, hatching butterfly cocoons, etc.
- Set up a space for water and sand play: pumps, gutters, riverbeds, etc. Combine it with an imaginary play space, which may include a wooden kitchenette, natural objects, and actual accessories rather than miniature or play-versions (for example, actual jugs, utensils, mortar and pestles), etc.



- Arrange for natural shelters (e.g., a tunnel or teepee under a willow tree, space below the branches of a balsam fir, etc.) or constructed shelters (e.g., a wooden playhouse, covered courtyard, a yurt etc.) for temporary protection during adverse weather conditions, while observing the plants bending in the wind, listening to the pitter-patter of falling raindrops, etc.

- Highlight the different elements of nature, such as light, wind, and rain, with weathervanes, wind chimes, wind speed indicators, thermometers, rain gauges, rainwater gutters, prisms, plexiglass or textured or tinted windows, as well as a rainwater collection system (for playing, watering plants, or even for setting up a hand-washing station!), etc. And why not add a small fire pit as well—as long as it doesn't pose any safety hazards and complies with the municipal regulations in your area!

- Plan one or several designated outdoor areas where the children can eat their meals and snacks and sleep at any time of year, while giving due consideration to issues related to regulations, hygiene, cleanliness, privacy, sociability, etc.



Please refer to the technical information sheets on food, outdoor naps, and sanitary requirements in Part 3, on p. [238](#), [240](#) and [242](#)

- In winter, the outdoor play area should be organized in such a way as to encourage the children's explorations and play, in all forms, while in contact with snow and ice: A place where the children can gather icicles, build snow forts, or construct snow landscapes featuring alternating hills and valleys, etc.

Setting up a naturalized play space requires the mobilization of many stakeholders: parents, education staff, management, and the board of directors. It may be wise to bring a landscape planning specialist on board and do some background reading to help evaluate and enhance the quality of outdoor play spaces:

- The 7 Cs, a Canadian resource that can help guide you through the process of creating play spaces for young children ^{132_133}
- *POEMS—Preschool Outdoor Environment Measurement Scale*, a resource developed by a team of researchers at North Carolina State University and the University of North Carolina¹³⁴
- The Alliance québécoise du loisir public’s Espace project sheets, some of which deal with setting up play spaces¹³⁵



To enhance your understanding, please complete the exercise on p. [198](#)

2.3 Make use of nearby natural environments

Just as naturalized indoor environments and outdoor play spaces are important components of nature-based education, seeking out a nearby natural environment and spending time there on a regular and extended basis is an excellent idea too. Bear in mind, however, that playgrounds or landscaped parks, schoolyards or ECS yards, or botanical gardens do not necessarily constitute natural environments per se, unless they include one or more areas that have been left in their natural state, meaning they have not undergone any or only very little landscaping.

Natural environments are ideal for encouraging whole-child development and nature connectedness in young children. Immersed in a natural space, children reconnect with and tap into profound emotions and senses, such as freedom, confidence, wonder, rootedness, etc. Adults present with the children can also sense the beneficial effects of being in a natural environment with much less noise and stress. Parents and educators/HECPs who have spent extended periods of time in natural environments together with young children report feeling a sense of well-being and calm. Relieved of certain duties and unencumbered by the limitations associated with a fixed schedule, parents and educators/HECPs may be much more available and can savour these moments of discovery and shared play.

2.3.1 Choose a nearby natural space

Selecting an appropriate site is the cornerstone of establishing a practice of immersion in a natural environment. Several criteria should be considered.

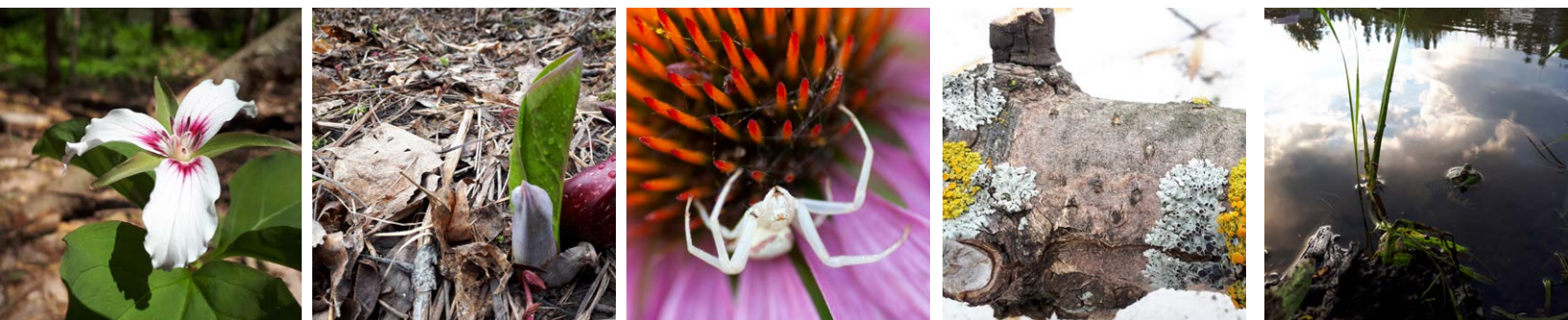
Municipalities can play an important role when selecting or developing a natural environment. On September 1, 2020, in an attempt to address the nature deficit, the Ville de Laval adopted a [master plan for its public parks and spaces](#) that recognizes the importance of giving young children access to open natural spaces located near their homes or childcare facilities.

Site accessibility:

- Keep in mind the distance to the site. Ideally, it should be located right next to the ECS grounds! Nevertheless, young children are capable of walking up to 500 m on a regular basis; older children can cover up to one kilometer.
- How to get there? Your first priority should be to travel there on foot, followed by bicycles or other active transportation methods, and finally by bus (independent minibus, public transportation, or a private bus transportation service)



- Keep in mind the number and magnitude of any obstacles on the way there: sidewalks, footpaths, separate walkways, streets or main roads, railway tracks, ditches or ravines, creeks, steep slopes, etc.
- Consider if the site is open to groups of freely exploring children. It is best to contact the owner or manager of the site to check for any issues and to lay the groundwork for a productive collaboration.
- Consider whether anyone else regularly uses the site, such as cross-country skiers, snowmobilers, cyclists, hunters, bird watchers, etc.



The site's features:

- Biodiversity: Flora, fauna, mushrooms and lichens, etc. The richer the biodiversity, the greater the range of experiences and discoveries.
- The variety of habitats and ecosystems: deciduous or coniferous forest, bog, field, creek, river, beach, glade, vacant lot, green back alley, etc. Sites that offer a diversity of habitats should be given preference. The habitats may be explored one at a time according to the seasons.
- Varied landscapes: Elevations, ravines, slopes, hills, sandpit, open or covered spaces, vegetation density, etc. Ideally you would aim for diversity in this respect as well to help ensure a greater range of movements, challenges, and discoveries.
- Surface area: Very compact areas serve the needs of infants and toddlers well, whereas older children (2-3 to 5 years old) may benefit from larger expanses. The site's surface area will also help determine how many groups of children can be there at the same time.



- The presence of loose parts and open-ended materials: Natural spaces offer the advantage of constantly renewing branches, leaves, and seeds, which serve as primary sources of inspiration and exploration. Landscaped or cleaned parks, on the other hand, where dead branches, leaves, rocks, and other loose parts and open-ended materials are regularly removed, may be less engaging.
- Seasonal or periodic changes: Is the site located in a flood-prone area?
- The soundscape: Noise levels can considerably affect the quality of the experience available to the children. As such, the proximity of traffic routes, industrial facilities, or high-voltage power lines must also be considered.

«At first, we thought the forest opposite the CPE would be too small. As it turns out, however, it offers good biodiversity and a variety of landscapes. There is no landscaping whatsoever. It has many trees that are suitable for climbing. All in all, one year later, we use only about 30% of the forest's surface area for two groups of 4-to-5-year-olds. Our base camp is just five minutes from the CPE, which is a big advantage! Anyway, we have to take the time to explore other nearby possibilities. This might be the perfect site! »^{ee}

^{ee} An educator with first-hand experience of the *Alex project*

The site's capacity to accommodate several groups of children

- Fragility of the ecosystems: Certain habitats or species are subject to conservation issues, which need to be taken into account before visiting the site with groups of children (please refer to the chapter, *Fostering nature connectedness*, on p. 159).
- Safety issues: Before selecting a site, it must be assessed for any health and safety issues (please refer to the chapter on a balanced approach to risk and safety, on p. 138). The assessment can lead to different courses of action such as rejecting the site, designating certain areas as no-go zones, planning risk mitigation measures, etc.
- Availability of sanitary facilities: Although not a requirement, the availability of sanitary facilities can be a facilitating factor for visiting a site regularly and for extended periods of time.



Please refer to the technical information sheet on sanitary requirements in Part 3, on p. [240](#)

In a nutshell, even though an ECS may be looking for the perfect site, in many cases, compromises will have to be made...

2.3.2 Staying put or roaming in the natural environment?

If the territory is expansive enough and offers the option to move around, should you give preference to staying put in the same spot, or rather encourage frequent changes of place and exploring various areas (roaming)?

Visiting the same area offers several advantages: intimate knowledge of the site and its potential; the possibility of noticing changes over the course of several days or with the seasons; a sense of confidence, belonging, and responsibility.



On the other hand, many practitioners also report advantages associated with frequent changes of location, in particular for older children. By moving around, the children discover new ecosystems, which serves to rekindle their curiosity and sense of wonder. The discovery of unexpected places can excite them and stimulate their creativity. They are encouraged to tackle new challenges and engage in new play or projects. The changing seasons are an excellent time to undertake these little migrations!

You should nevertheless take into account the possibility of the natural environments getting

trampled or overused, as some ecosystems can be very fragile. In some cases, it may be better to liberally trample one main site rather than enjoy a free run across various sites at different occasions. If possible, you should undertake this reflection together with the site's manager and with ecologists.

Is it better to stay put or to roam? The answer to this question probably lies somewhere in between. It is best to encourage the children to stay put in one or several areas selected in line with the criteria outlined above, while at the same time encouraging periods of exploration and discovery as the children move around, as well as the different habitats' capacity to tolerate their explorations.

The base camp:

A base camp may be chosen and set up either in the site's centre or along its periphery. It becomes a reference and transition point between the external world and the natural environment. It is the home base from where explorations are organized. The frequent return to base camp aims to bring a measure of predictability as well as unifying and reassuring habits to the constantly evolving natural environment. Children gradually develop an attachment and a sense of belonging to it.



“Ich lebe mein Leben in wachsenden Ringen, die sich über die Dinge ziehen.”

By Rainer Maria Rilke, Austrian poet, 1875–1926.

Translation: *I live my life in widening circles that reach out across the world.*

« We have a base camp, which they enjoy returning to. It is always in the same place. I think it reassures them. »^{ff}

A base camp with a roof, such as a tarp, dense tree cover, or a structure made of branches, can offer protection against heavy rain or blazing sunshine. It is also a place to come together, have a bite to eat, discuss, read or consult a book, handle tools or any other accessories that were brought along.



The ECS should be particularly mindful of ensuring that the base camp be in harmony with the natural environment in which it is located. Large-scale set-ups requiring lots of artificial materials or changes to the ecosystem in which the base camp is located should be avoided. Furthermore, sometimes it is advisable to periodically change the base camp location to help preserve the vegetation, or, in case it becomes damaged, to allow it to recover.



Please refer to the technical information sheet on the base camp in Part 3, on p. [232](#)

^{ff} An educator participating in the *Alex-Éducation par la nature* research project

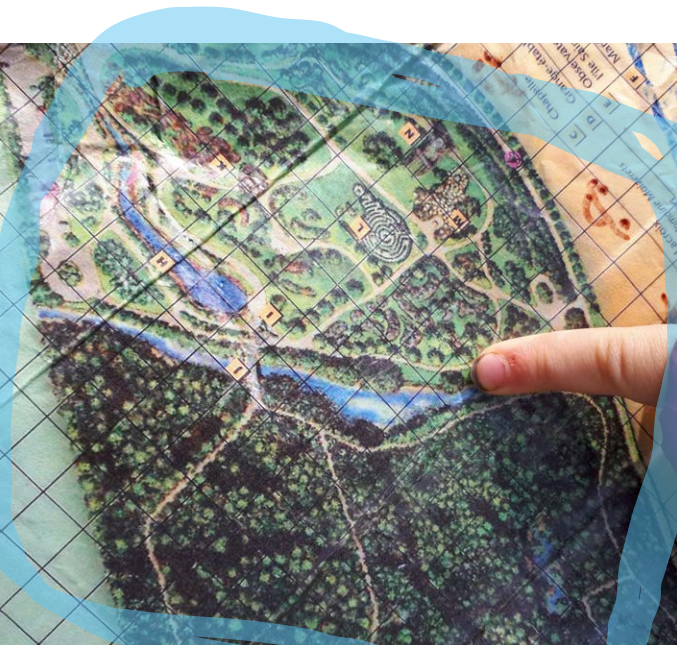
As time goes by, more than one base camp can be set up, making it possible to explore different environments. For example, having one base camp in the woods, another near the river, and yet another in a field—three different environments and therefore three base camps.

It is also likely that you will select and set up different base camps depending on the season. In winter, there is the need for a more readily accessible location, which can be set up with branches and snow. In summer, if the chosen area is prone to having mosquitoes (bogs or marshes are best avoided at that time of year!), plan for a protective device, such as a portable mosquito net suspended from a branch, or a collapsible or permanent screened shelter.

« A location near a natural slope is helpful, as it effectively allows young children to warm up quickly, before or after a meal or story or any other stationary activity »⁹⁹

Familiarity with the site and map of the territory

During the first few sessions in a natural environment, young and old children alike will be more alert as they familiarize themselves with the new surroundings. As they spend more time on the site, they may find reference points and become increasingly better at orienting themselves as they internalize a map of the territory. The youngsters may give names to the most meaningful features. An old, hollowed-out tree stump becomes the cauldron; trees with intertwining branches become the carousel, an overgrown path becomes the secret passage, etc.



Taking ownership of the territory in this manner constitutes a pivotal moment. Some ECSs choose to create a visual representation of it: A map is sketched, allowing the different habitats, boundaries, and meaningful features to be situated on it. The map can then be shared with the children and parents. Laminating the map makes it into a highly-valued tool for the young children, who may wish to consult it on a daily basis when they choose what projects to undertake or help guide their movements. Moreover, it is well-suited to supporting the development of spatial representation and orientation.

⁹⁹ An educator with first-hand experience of nature-based education as part of the Alex project

2.4 Putting down roots in the community: the place-based approach

Over the past several decades, educational childcare facilities in the Italian regions of Emilia Romagna and Tuscany developed an educational philosophy rooted in the community. The environment, composed of indoor and outdoor spaces, and the wider Italian municipality, is described as the third educator. Groups of children are encouraged to explore their territory, establish relationships with the people who live or work there, and may even be consulted when a public space or building is slated for redevelopment. Young children are acknowledged by their community, which encourages them to settle into their neighbourhood life.

In New England, David Sobel¹³⁶ highlighted the importance of education being rooted in the community by way of what he terms “place-based education”. This approach emphasizes the local community, nearby natural environments, and the historic-cultural territory as the starting point of learning. The role of educational childcare facilities, he argues, is to foster the creation of links to the community, an appreciation for the surrounding world, and involvement in civic life.

In Québec, this same notion can be found in Section 5 of the *Educational Childcare Act*, which mentions that the education program must include activities aimed at fostering whole-child development and educational success, as well as “helping children gradually adapt to life in society and integrate a group harmoniously.”¹³⁷ The place-based approach encourages ECSs to explore the nearby natural, cultural, and built environments, and to take an interest in local history and geography. As such, natural environments are part of the broader environment, and children are encouraged to recognize the interrelationships that link them. Places tell us something about the people who live there. What are they telling us? How did these places change the living beings inhabiting them? There are many questions to resolve as children roam back alleys, vacant lots, the seashore, or other areas of the country, where nature and culture co-exist.



3. Structuring measures to support environments that are rich in biodiversity, loose parts, and open-ended materials

A number of measures may be considered to help ensure the long-term viability of ECSs' naturalization efforts and practices:

- Establish benchmarks and strategies to guide the selection and purchasing of educational materials, such as:
 - A recycled materials supply plan
 - A green purchasing policy
- Establish a system for collecting loose parts and open-ended materials from families
- Sign agreements with companies, craft-persons, and waste recovery centres for purchasing materials and equipment
- Devise a plan for naturalizing all indoor and outdoor facilities
- Determine the criteria for selecting a natural site
- Set benchmarks for setting up base camps in nature
- Sign agreements with partners in the community to help facilitate site access and use
- Initiate a shared minibus project in the community to help get out into the natural environment
- Etc.



Second principle: An environment rich in biodiversity, loose parts and open-ended materials

Key characteristics

- **Availability of loose parts and open-ended materials in the rooms and outdoor play spaces:**
 - Wood blocks, sand, water, soil, branches, fabrics, boxes, recycled materials, ropes, etc.
- **Naturalization of indoor spaces (e.g., rooms and hallways):**
 - Furniture and equipment made from natural materials and colours
 - Non-poisonous plants, rocks, water, sand, logs, etc.
 - Model landscapes, terrariums without animals, mobiles
 - Pictures and books representing local biodiversity, etc.
- **Naturalization of outdoor play spaces (naturalized playgrounds):**
 - Furniture, equipment, and flooring made from natural materials and colours
 - Shrubs, climbing and potted plants, trees, willow tree tunnels, etc.
 - Stones, sand and water corners, logs, branches, etc.
 - Pathways, secret corners, outdoor napping and eating areas Vegetable gardens in containers or pots
- **Spending time in nearby natural environments:**
 - Prioritize locations that offer a degree of habitat variety (fields, forests, beaches, hills, ravines, etc.) and rich biodiversity (fauna, flora, etc.)
 - Keep in mind any access issues affecting these natural spaces: distance to the site, safety concerns on the way there and back, means of transportation, etc.
 - Choice and layout of the base camps and concealed hideouts
- **Making use of spaces in the vicinity of the ECS:** back alleys, parks, public places, etc.

How is each of these characteristics reflected in your own practice? Consider situating your SGE regarding this second principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

Third principle: Emergent curriculum centred on exploration and play

Recognizing children as competent and holistic

As they enter the forest one day after the storm, the children are rendered speechless. The path is littered with branches, the ground is soaked, and several areas are flooded. A true battlefield, according to Amira, their HECP... For the children, however, the devastation is a source of excitement. The hours that follow are filled with play and explorations. Walking in the mud, they experience suction, as they fall and get back up again. At one point, Théo feels caught: "It's a trap!" he calls out, laughing at first, but then starts to cry. He keeps pulling and pulling...until he loses his boot, stuck in the sludge. His friend Julia comes to his aid and retrieves the boot, using a branch for a lever. Positioning herself next to Théo, Amira reassures and helps him place his feet on dry ground. What a scare! As he looks at the deep, black sludge in which he felt trapped, he notices some animal footprints right next to the sludge. Théo calls out to the other children, who come running.



In the meantime, Amira and Julia pick up some small branches and set them down around the footprints so they are easier to spot. The children wonder what kind of animal might have left these tracks. Amira supports the children's inquiries and notes their hypotheses in her logbook. A little while later, three children wander off and initiate a new project. Using branches and rocks, they build dams, diverting the course of the small creeks flowing down the hillside.

Nearby, the other children launch into a pirate-style role play around a dead tree. Amira takes a few photographs of these initiatives and then walks up to the first group, stating: "Well then, you seem to be real beavers!" which causes the children to double down on their efforts. When they return to their childcare facility, they continue their reflections and a project begins to take shape: Towards the end of the day, they will construct a large dam in the sand and water area in the yard! Who knows where all this will take them!

Nature-based education fosters emergent curriculum, which takes shape along with the children's lived experiences, interests, and initiatives. An environment rich in play and exploration options, combined with a schedule that is flexible and respects the children's pace, and an educator/HECP who is available, all makes for fertile ground, where emergent curriculum can unfold. This approach does not prioritize activities planned and directed by the adult. The educational action, which undergoes constant reconstruction, is founded on high-quality interactions (please consult the chapter outlining the key research findings, on p. 20). The educators/HECPs should be attentive to what triggers the children's interest. Based on these emergent situations, the educators/HECPs adjust their interventions in a way that enriches these moments of complicity, wonder, and exploration, and helps inspire larger-scale projects.



1. Why choose emergent curriculum?

In Québec, all ECS service providers must implement an education program with the goal of encouraging whole-child development, guiding the children to gradually adapt to and harmoniously integrate into community life, and encourage their educational success. The Accueillir la petite enfance¹³⁸ education program outlines a general framework for this educational action. On the other hand, it is up to each ECS to decide on the specific approaches to guide daily practices. The choices must be founded on a specific vision of children and their environment.



Some perceive children in terms of their needs or deficiencies, situating their development in relation to universal standards and goals. In this case, the educators/HECPs plan activities in accordance with what is expected of children in a specific age group. They also attempt to position each child on a developmental scale, while identifying any delays vis-à-vis the average, so they can propose targeted activities and support.

Others view children as strong beings who are “asset-rich, highly resourceful, and have extraordinary potential.”¹³⁹ In this case, the educators/HECPs will focus on identifying the children’s interests, budding skills, zones of proximal development, manner of relating to others, and their questions and suppositions, to support and complexify their meaningful experiences.

Along with emergent curriculum, nature-based education is an excellent fit for this approach to childcare. From the earliest months of their lives, they are perceived as curious, strong, and able, keen to explore their environment, and in awe of the world’s abundant riches.



Nevertheless, this does not mean that you should ignore the approach of keeping an eye out for specific needs children may have in certain circumstances. For example, if a child exhibits major difficulties when moving around (fatigue or balance issues), it is advisable that the educators/HECPs focus their observations of the child, and, if warranted, consider support measures. An adult should be sensitive to children’s needs or difficulties in a particular situation or to an aspect of their development, without clouding over the adult’s overall impression of these children. Educators’/HECPs’ educational decisions should always take cues from the children’s interests, initiatives, and budding skills.

Emergent curriculum is prioritized in nature-based education because it

- Recognizes children’s intrinsic strengths and skills
- Encourages power-sharing in a spirit of democrac
- Can be adjusted to the unique situation of each child
- Values the “hundreds of languages of children” as productive means of expression
- Embraces the whole-child approach, without structuring play situations geared to specific learning goals that are connected to a single aspect of children’s development
- Is founded on the experiences of recognized education practices throughout the world (in Pistoia and Reggio Emilia, Italy; in the Scandinavian countries of northern Europe; etc.)

- Is founded on numerous recent research projects, which have found the following to be true:
 - Young children, even during their first year of life, are curious and have remarkable abilities¹⁴⁰
 - Play is the best context in which to learn and develop. However, scaffolding children's play is one way to enhance its value¹⁴¹
 - Children's intrinsic motivation facilitates their learning¹⁴²
 - Emergent curriculum frees educators/HECPs from the need to facilitate structured activities, allowing them to devote themselves to scaffolding and documenting the children's experiences¹⁴³
 - The quality of the interactions in the group is the best predictor of children's learning outcomes
 - The quality of the interactions in the group can be further enhanced if the children get to freely choose the location where their group will go.¹⁴⁴



2. How does one implement emergent curriculum?

Emergent curriculum is not founded on a fixed approach or a structured program. Quite the contrary!

« It truly is a richer environment for learning. In a natural environment, everything starts with the child. (...) I never know what will happen, what we will be dealing with, or who will be the driving force. (...) I try to adjust as things unfold. (...) We start out with the children's interests and ideas. Then we try to elaborate, develop, get them to think, and push their learning a little further. »^{hh}

Educators/HECPs and managers interested in adopting this educational approach—so very characteristic of nature-based education—may find the following points insightful.

2.1 Recognize and emphasize the many sources of play and explorations

If it isn't up to the educators/HECPs to anticipate and plan the educational experiences, what then are the sources of these experiences, and how can the children's involvement and initiatives be encouraged?

Whether inside the childcare facility or at its outdoor grounds, the children's first source of inspiration will be the abundance of **loose parts and open-ended materials on offer**, which they will be able to constantly observe, handle, and combine according to their imaginations (please refer to the chapter covering children's environment and materials on p. 60). The transition from using toys and manufactured materials to using loose parts and open-ended materials requires an adjustment period.

« When the CPE replaced all the toys with loose parts and open-ended materials, the children's initial reaction was to flit from one material to the next and manipulate each one without using it to engage in play. As time went by, they became increasingly inspired by these types of materials, and the projects they now initiate are becoming ever more complex. »ⁱⁱ



^{hh}Educators participating in the *Alex – éducation par la nature* research project

ⁱⁱ An educator with first-hand experience of nature-based education as part of the *Alex* project

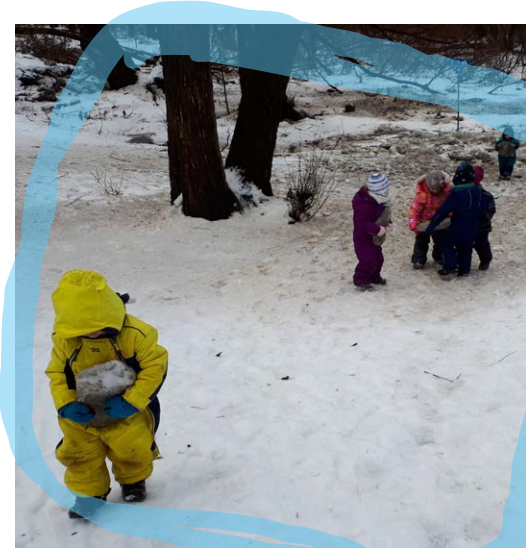


Furthermore, the adult can take on the **role of stage manager** (please refer to the chapter, *High-quality educational interactions*, on p. 99), which means organizing the material in such a way that it stimulates the children's curiosity and involvement. Some refer to this as encouragements, triggers, stage management, incitements, or provocations. Children often react in unexpected ways. Be that as it may, the educator/HECP are encouraged to fall in with the children's initiative.

For example, noticing that the apple tree has burst into bloom, Fatou moves two chairs in front of the window and places binoculars on them. As they arrive, two children grab the binoculars and use them to look out the window. But rather than pay attention to the apple tree, they compare the tails of the squirrels that happily climb all over the tree. Fatou falls in with their initiative and supports a discussion on the role of animals' tails.

In the natural environment, **changes of weather and the daily or seasonal cycles** act as extraordinary stage management agents, constantly reconfiguring the setting and the options available to the children. For example:

- By preserving the tracks left by passing animals, the first snowfall reveals nocturnal activity in the heart of the forest. The children follow the footprints and try to imagine the pathways of these visitors during the night or early morning hours.
- Strong winds cause the most delicate branches to fall and replenish the undergrowth. It is a true goldmine for our young builders.
- Heavy rains create temporary pools through which the toddlers scamper. The older children, for their part, without holding back, sprint straight through them.





he play and explorations children engage in stem from their interactions with the people, events, and the environments in which they live, in their home, street, daycare, neighbourhood, park, field, forest, etc. Their resulting projects should reflect the natural and cultural context of their territory. As such, situations likely to appeal to children won't be the same in an ECS situated in the middle of a mining region, an urban neighbourhood, a coastal village, or an indigenous community. Similarly, the presence of a creek, bog, or major river near the ECS will offer multiple sources of questions and possible actions.

Emergent curriculum is intrinsically versatile and not restricted to a single field or area. It can be **implemented anywhere**. Practitioners are strongly encouraged to ensure continuity and consistency between children's experiences in each separate environment.

For example, when children spot the first formations of snow geese passing overhead, they lie down on the grass and observe them together with Joyce, their HECP. They are fascinated by the birds' flight pattern ("V as in Victoria!" one little girl says) and by the frequently changing lead bird at the front of the formation. Back at the childcare facility, the conversation continues during the meal. Then Joyce produces a large sheet of paper, encouraging the children to write down everything they observed, the questions they have, etc. Joyce sketches a concept map that she hangs on the wall, at eye level with the children. During nap time, Joyce brings out a few stories and documentaries about migratory birds and places them in the library area. She also locates an audio recording of snow geese that she plays at the end of the day during tidy-up time..



2.2 Try out various scenarios

Just about any play situation or moment in life can spark ideas and interest in the children. It is difficult to anticipate how everything will evolve. There are three possible scenarios in emergent curriculum: 1) recognize the inherent richness and potential of free play, 2) offer present moment-based scaffolding, and 3) co-construct a major project or learning venture.

Fig. 8 The three emergent curriculum scenarios



2.2.1 Recognize the inherent wealth and potential of free play

We no longer need to make a case for the advantages of free play.¹⁴⁵⁻¹⁴⁶ The children choose the material and place, and, when relevant, their play. This type of play can take on many forms: motor skills challenge, exploratory or constructive play, experimentation, imaginative play, relaxation or observations, etc.

Educators/HECPs conduct their observations in a caring manner, without becoming directly involved in the children's play. They take photos and make a few notes to document the children's words, actions, and interactions.

One morning, Julie, Adèle, and Dara dig up a large rock that they declare to be a baby. They spend quite some time carrying, feeding, and washing their baby. Justine, their educator, observes them while keeping her distance. She takes advantage of this opportunity to collect a veritable treasure trove of observations to document the children's learning.



2.2.2 Offer present moment-based scaffolding

Emergent situations are also an opportunity for educators/HECPs to offer one-off individualized scaffolding to a child or group of children. This kind of facilitation or scaffolding is a recognized strategy for complexifying play and explorations, thereby supporting young children's thinking and learning.¹⁴⁷

Consider the following situation: two children head towards an area of the forest where the ground is littered with many branches of various sizes. They begin to pick up and move the branches around, but then stop. Their educator/HECP detects an emergent interest and a scaffolding opportunity. Educators/HECPs can proceed as follows:¹⁴⁸

- **Slow down and stand to the ready**

The educators/HECPs observe all the children in the group, who all seem engrossed in their play. Positioning themselves in such a way as to be able to see all the children, one of the educators/HECPs chooses to concentrate for a moment on the two children. This educator/RGS stops and gets her logbook or smartphone ready.

- **Attentively observe the children and ask yourself questions**

While keeping an eye on the children, the educator/HECP tries to answer the following questions: What are they doing? What are they saying to each other? How are they interacting? What are they looking for? What do they have on their minds? How are they going about it? She briefly notes down her answers or suppositions and documents the emerging situation with a few photographs or videos.

- **Pinpoint the appropriate moment**

For example, when a child stops their action or surreptitiously glances towards the adult. The educator/HECP observes a child interrupting his play to look at the pile of branches and the other child trying to lift up a very long branch.

- **Approach the children and make eye contact**

The educator/HECP approaches the children, catches their eye and smiles, while observing the children's reaction. One of the two children smiles back.

- **Scaffold the child's play or reflections**

- The educator/HECP describes her observations to the child: "I can see that you are trying to move some large branches." The child replies: "We are hard at work!"
- She can ask the child an open-ended question to encourage him to explain their project or intention: "What are you trying to do?" The educator/HECP patiently listens to the answer, aware that it is sometimes necessary to wait and give the child time to think, or to add further sub-questions
- There are several available options for proceeding further: the educator/HECP participates in the project alongside the children; she remains nearby and continues to observe the children and document the construction project; she adds another element to the project to give it an added dimension.
- If the children take a break, the educator/HECP can seize the opportunity to question them about their strategies and reflections: "How did you manage to move that branch?", "What would happen if we tried this?", "How come you know that?", and so forth. If possible, the educator/HECP ensures that she keeps a record of the children's answers (audio or video recordings, notes, etc.). The questions can focus on the process implemented by the children (moving and assembling the branches) or else on the project's symbolic content (a castle, a spaceship, etc.)





2.2.3 Co-construct a major project or learning venture

In the case of infants and toddlers, emergent curriculum consists, above all, of these one-off scaffolding situations and free play. With older children, on the other hand, it is possible to elaborate more complex projects. Some play situations or series of questions can unleash such a degree of enthusiasm and involvement that it becomes the starting point for a much larger project.

These projects or ventures take shape based on the children's experiences, as witnessed, and perceived by the educators/HECPs, who adapt to the children's moves. As is the case with partner dances, each of the dancers always keeps an eye out for the other's next dance move. The child takes a step, the adult follows; the child takes another step, the adult either follows or waits and then suggests a variation, and so forth. For example, when some children first learned that nettles are a stinging plant, they wanted to avoid it at all costs. Then one day the woman responsible for the natural site told them that she had picked some nettles to cook a soup. Impressed, the children wanted to do the same. Their HECP supported their project all the way to tasting the soup!

The projects may take shape gradually, as new chapters keep getting added for as long as the children maintain their interest and involvement. Impossible to predict, the venture may last for as little as a few hours or extend over several days or even weeks. As for trying to predict when or how a project might end... At times you may think that the project is about to conclude only to see it suddenly revive or veer into a new direction.

Obviously, this type of project does not always take up all the space or appeal of all the children. Sometimes it can be just an individual project, or it may capture the interest of only two or three children.

Educators/HECPs can encourage children to continue with and complexify the project by exploring new channels of expression (symbolic play, visual arts, writing, singing, etc.) and modes of learning (planning the action, analysis, reasoning, language and thinking, etc.). **For the adult, it is less a question of the project's content than its process, i.e. the venture's scope for offering children opportunities to express themselves, learn, become aware, and put down roots.** For the children, on the other hand, the most important thing is the project's subject, which serves to generate and maintain their interest.

Example of a project that lasted several hours

When the children spot an odd-looking bird by the edge of the creek, they wonder what species it might be. Rebekka supports their questions, taking care not to give away the answer. She knows that by exercising their analytical abilities, reasoning, and ability to summarize, the children develop their thinking skills. She encourages them to observe the bird's features and actions, to make suppositions and to discuss them based on their prior knowledge: "Has anyone ever seen a bird with such a long beak?" This way of proceeding serves to maintain the children's motivation.

When they return to the CPE, they continue to talk about the bird while getting ready for their nap. Rebekka tells them a made-up story about a mysterious bird appearing in the heart of the city. When they awaken from their nap, one boy decides to search for the answer and identify the bird. He takes the identification guides and begins to search. Some other children quickly join him. It is the first time the children show so much enthusiasm while looking for something in this type of—fairly complex—guide.

After a few minutes of searching through and becoming better acquainted with the guide, they locate the section on water birds and conclude that it is a great blue heron. Wanting to confirm their supposition, they ask Rebekka if she took any pictures. Meanwhile, a girl goes to get a sheet of paper and some coloured pencils and proceeds to draw the great blue heron. Several other children follow suit and decide to draw the bird in their logbooks. When the parents come to collect them at the end of the day, the children rush to tell them about their discovery.

Example of a project that lasted several weeks

The story of the shelter in the forest stretched out over several weeks. At the outset, no one could have foreseen that the small shelter that Jamila's group of children built in the middle of the forest would give rise to a beautiful friendship between the children and some teenagers:

Returning to the forest following the weekend, the children discover that the shelter they so painstakingly constructed has been partially destroyed. Disappointed, they wonder who could have done such a thing: an animal, the wind or the rain, passers-by? They collect clues and attempt to solve the mystery.

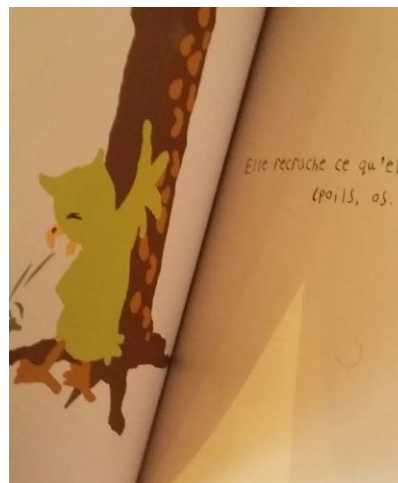
Two days later, they find their shelter not only repaired but enlarged! A volley of questions materializes. One boy suggests leaving a note in the shelter to thank the person who rebuilt it. They all get to work to write thank-you notes, resulting in six short messages suspended from the shelter's roof. The next day, a rainy day, the messages still hang from the roof, soaking wet. The children attempt to plug the gaps in the roof to protect the thank-you notes.

When they return to the forest a few days later--surprise! Their notes are no longer in the shelter, but the children find a message on the ground that has been written using natural items (pine cones, branches, and stones). Unable to decode the message, the children ask Jamila to take a picture of it. Back at the CPE, they proceed to try and discover its meaning. This is how they discover that the students in the school next door also spend time in the forest, but at the end of the day. An exchange of messages follows, giving the children and students a chance to get to know one another. A few days later, a meeting is organized. The children prepare a snack to be shared with their new friends. The air is filled with excitement, as they get ready for the meeting.



To enhance your understanding, please complete the exercise on p. [199](#)

Project: On the trail of the great horned owl



2.3 Rethink the concept of educational planning

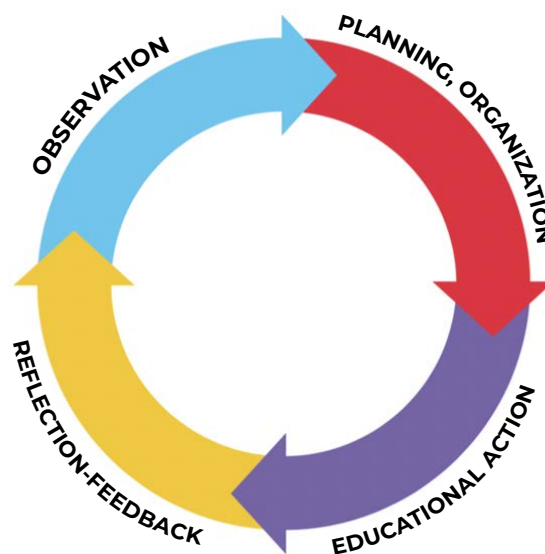
Rather than program or look for specific activity ideas for the children, the emergent curriculum educators/HECPs should focus their efforts on reflections during their planning time in order to:

- Compile and organize the impressions gathered (observations, photographs, videos, verbatim records, children’s creations, etc.)
- Identify interests, sources of wonder and amazement
- Identify certain budding skills or zones of proximal development
- Analyze the children’s experiences and interactions within their group
- Examine the possibility of a common thread or a major project emerging
- Anticipate what might happen, what could be encouraged or supported
- Identify learning opportunities

Planning and identifying the learning opportunities is always carried at two levels:

- The macrocycles in the educational intervention process, as presented in the *Accueillir la petite enfance* education program,¹⁴⁹ are determined based on pedagogical documentation (please refer to the chapter on p. 176) at set times reserved for this purpose, ideally on a weekly basis. These work sessions are an opportunity to take a step back and reflect on the next scenarios.
- The microcycles in the educational intervention process are decided in the heat of the action. At any given moment throughout the day, the educators/HECPs observe and analyze what strikes them as meaningful and then decide what role to adopt and how to intervene in the field.

Fig. 8 The educational intervention process



Key experiences in nature-based education

Emergent curriculum is intrinsically unpredictable. Nevertheless, in natural environments play or exploration opportunities frequently recur. We have shared examples of a few of these here to help educators/HECPs recognize them and appreciate their inherent possibilities. This may enable educators/HECPs to encourage children to complexify their initial experiences. The educators/HECPs may also benefit from referring to this list when offering the children suggestions:

- **Symbolic play: everything is created, everything is possible. The children's imagination is king in the undergrowth:** time stands still, everyone becomes someone else, the branches become magic wands, and the dead trees transform into buses or spaceships. Time, space, loose parts and open-ended materials, freedom and time to play. Everything is in place for increasingly mature symbolic play.¹⁵⁰
- **Research process:** observations, questions, suppositions, the experience of problems and their resolution, etc. There are countless opportunities for guiding the children's questions about the world around them.
- **Land art :** temporary works of art produced with natural items and materials available in the environment (for example, sand drawings; clay modelling; sculptures made with pebbles or with icicles in winter; a mandala made of branches, stones and leaves; a garland made of ivy and flowers; weavings or mobiles; rock engravings; paintings produced with water that has been dyed with crushed roots, etc.).
- **Stories and songs:** traditional tales recounted without the book, songs about nature or adventure, etc.
- **Constructions :** a shelter in the shape of a teepee or lean-to, improvised tents, pulley systems, culverts, dams, camps, teeter-totters, ladders, swings, etc.



- **Observation- and listening-based play experiences:** looking under rocks; scanning the air; looking in the water or through ice; observing light and shadow play; listening for the sounds of moving leaves in the wind, or rain hitting a pond; recording and comparing birdsong, the chuck sounds made by squirrels, or chirping sounds of crickets, etc.

- **Reading in the forest:** consulting an identification guide; exploring a documentary; enjoying a storybook, etc.
- **Motor skills challenges:** leaping, running, climbing, crawling beneath branches or roots, rolling, throwing, sliding, etc.
- **Rules-based games:** tag games, hide-and-seek, etc.
- **Forest notebook:** for drawing what they see in the forest, writing down their questions and suppositions, etc.
- **Discovery of tools:** peelers, knives, mallets, files, (smoothing) planes, saws, crankshafts, scales, tape measures and other measuring instruments



3. Structuring measures to support the implementation of emergent curriculum

A range of measures may be considered to ensure the long-term viability of the ECS's emergent pedagogical practices:

- Add statements highlighting emergent curriculum in the ECS's **education program**
- Create a **professional development plan** to underpin the educators'/HECPs' changed practices
- Review existing **education support** strategies to ensure they promote and enhance the educators'/HECPs' sense of confidence
- Review and rethink **educational planning procedures** (tools used, planning time slots, available support during these time slots, etc.)
- **Share with the parents** the emergent curriculum practices and goals as well as their science-based rationale
- Schedule **training events** that are consistent with emergent curriculum



Third principle: Emergent curriculum

Key characteristics

- **Vision of children given opportunity to explore their strengths and for holistic development**
- **Emphasize the multiple play and exploration opportunities:**
 - The children's interests, initiatives, and questions, as well as the challenges they want to tackle
 - The daily changes in the natural environment
 - The educators'/HECPs' provocations and other suggestions
- **Observe and identify**
 - Situations that arouse the children's curiosity and interest and which they are willing to engage in
- **Try out different scenarios:**
 - Recognize the richness of free play and adopt the role of a caring observer. Document the play while refraining from intervening in it
 - Offer present moment-based scaffolding by interacting with the child or children in order to support them in overcoming a challenge, complexifying their play or explorations, etc.
 - Co-construct a major educational project or venture, while encouraging the emergence of a common thread around the situation initiated by the children, which may continue and evolve for a period of time extending anywhere from a few hours to several weeks
- **Rethink the concept of educational planning:**
 - Sort, analyze, and organize your pedagogical documentation
 - Plan specific learning opportunities
- **Key experiences likely to emerge and be encouraged further by the educators/HECPs**
 - Symbolic play; mini-research process; land art; traditional games, stories, and songs; motor skills challenges, observation- and listening-based play experiences; constructions; reading in the forest; first notebook; discovery of tools

How are each of these characteristics reflected in your own practice? Please orient your ECS with regard to this third principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

Fourth principle: High-quality educational interactions

Enhancing the children's experience

Despite the bitter cold, the children lie stretched out on the “ice floe” by the creek and observe the flowing water down below. Nathalie, their educator, lies next to the children, listening to them. They have many questions. Why is the creek not frozen over? How do the ducks manage to swim in the creek without getting cold? Do they get wet underneath their feathers?

Trying to keep the children's attention focused, Nathalie reformulates their answers, encourages them to make suppositions and deepen their reflections. At one point, Filou says: “Maybe it's because the water is warm...” Nathalie asks how they can put Filou's idea to the test...without getting wet! After exploring different options and identifying their available “tools”, they decide to attach a rope to a bucket so they can collect some water. Anya is appointed to lower the bucket, while firmly gripping the rope. Gosh...the bucket floats on the surface without filling up with water. Nathalie smiles, realizing that this situation offers several options to get the children to think.



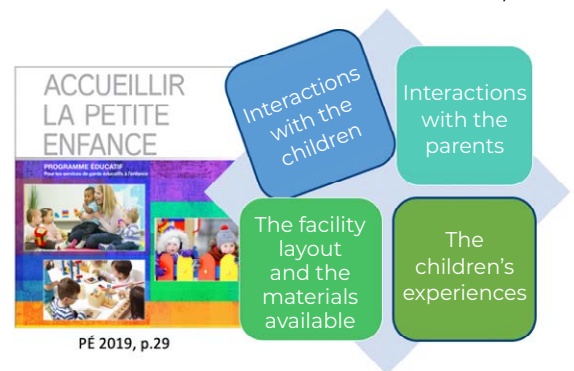
1. Why do high-quality interactions constitute a principle of nature-based education?

Interactions refer to the ways in which adults and children relate to each other. They can be expressed in different ways: an educator/RSGE who warmly welcomes the children in the morning with a smile, lively conversations between adults and children at mealtimes, or an educator/RSGE who repeats words to a baby to encourage them in their first verbal attempts.

Nature-based education, just like the *Accueillir la petite enfance* education program (itself inspired by CLASS from Hamre & al., 2014; La Paro & al., 2012; Pianta & al., 2008), relies on the quality of the interactions between the educator/HECP and the children for the following three main reasons:

- Because the support provided by an adult enables children to complexify their play¹⁵¹.
- Because it is a key variable available in educational settings that makes it possible to predict the learning outcomes and the children's development¹⁵².
- Because the natural environment and emerging curriculum offer contexts that lend themselves particularly well to implementing high-quality interactions^{153,154}.

Free play is increasingly recognized for its educational value. Many experts have made a case for removing adults from children's play, allowing the latter to benefit from greater freedom. This autonomy provides advantages for their development¹⁵⁵.



However, while the virtues of free play are not questioned, several recent studies emphasize the importance of supervising young children when they play. Far from undermining the children's play, scaffolding their free play **can expand its value and scope in terms of the children's learning and development—if it is done right (high-quality interactions) and at the appropriate time.** This is what is known as facilitated free play.

The concept of what constitutes quality in an ECS setting may vary, depending on the type of reference framework applied.¹⁵⁶ Nevertheless, there is general consensus that **the quality of interactions between the educator/HECP and the children is the best predictor of the children's learning and development.**¹⁵⁷ In Québec, the interactional quality constitutes one of the pillars of the *Accueillir la petite enfance* education program¹⁵⁸, where it takes three main forms: emotional support, organization of community life, and instructional or learning support.

Throughout the world, research that has attempted to evaluate the quality of interactions in educational childcare services highlights an almost generalized trend: while emotional support and the organization of community life generally exhibit an average or high-quality profile, instructional or learning support almost always seems to come up short at a low or medium-low level. However, this is not always the case. In Finland¹⁶⁰, and, more recently, in Australia¹⁶¹, two studies reported instructional support interactions being rated average to high. What could explain this observation? One hypothesis is that a child-centered educational approach, a flexible schedule, and time spent outdoors in a natural environment are effective. In Québec, the results from the *Alex – éducation par la nature* research project¹⁶² also point in this direction.

Does the quality of interactions vary in different contexts? Does the location, the materials available, the way the activities are organized, or the type of supervision influence the quality of the interactions? Nature-based education constitutes a promising way to enhance quality interactions, in general, and learning support in particular. Several field experiments carried



out in Québec highlight how—in the opinion of parents and educators/HECPs—being immersed in a natural environment fosters rich and sustained interactions between children and adults. Nature-based education appears to be particularly conducive to the development of independent thought, risk management, and the awakening of ecological awareness.

Nature-based education is founded on the following assumption: **By prioritizing an updated vision of time, places, and materials that spark curiosity and a sense of wonder, and by using an emerging pedagogical approach founded on the interests and initiatives of children, the conditions are in place for offering high-quality interactions.**

However, the equation Time + Natural environment + Emergent curriculum = Higher-quality interactions does not automatically hold true, as improving the quality of interactions requires a sustained and conscientious effort on the part of the educators/HECPs and the organizations they answer to.



2. How can high-quality interactions within the context of nature-based education be implemented?

The key findings section of the research on nature-based education (p. 20) highlights certain characteristics of practices based on contact with nature that are being deployed around the world, particularly with regard to the type of support offered to young children by adults. The Québec nature-based education movement is in line with these environments, while drawing on two main elements: the quality of interactions, as defined in *Accueillir la petite enfance*¹⁶³ as well as the play facilitation continuum¹⁶⁴. These two models represent an invaluable lever for educators/HECPs to support children as they develop all the facets of their personalities.

2.1 The quality of interactions within the group

2.1.1 Emotional support

The educators/HECPs who offer emotional support to the children create a friendly atmosphere, they are sensitive to the emotions and difficulties experienced by toddlers, and they take their point of view into consideration throughout the day¹⁶⁵. They make sure to create warm and reciprocal relationships with the children by addressing them with **respect and enthusiasm** and by paying **particular attention** to each of them. They also remain alert to what the children are experiencing and expressing and make sure they are given significant responsibilities. They avoid **negative interactions** (shouting, threats, sarcasm, etc.) at all times, as these can cause socio-emotional harm to the children. The [guide sur la prévention et le traitement des attitudes et des pratiques inappropriées](#) (Guide on the Prevention and Treatment of Inappropriate Attitudes and Practices (free translation)) from the Ministère de la Famille provides further details.

The context of nature education is particularly conducive to the creation of a warm environment in which the educator/HECP is on the lookout to respond to the different ways in which the children express their needs.

« I find there is more time to ask them: 'Is it going well? What is happening here? What are you doing?' And more opportunities to get them to talk: 'Were you scared? Let's go back there. I'll go with you, I'll accompany you. »ⁱⁱ



ⁱⁱ Éducatrice participant au projet de recherche Alex – éducation par la nature

It turns out that the context of being immersed in a natural environment also diminishes the need for disciplinary interventions, as stated by one educator who participated in the *Alex* project:

« There aren't as many disciplinary to carry out, or interventions where the children lose their patience. The interventions are often more positive now [...] Occasionally conflicts erupt, of course, but they are often easier to manage. Maybe the children also feel less boxed in, less restrained in this environment. »^{kk}

Warm interactions for the emotional support of children

Emotional support is based on creating a warm and respectful atmosphere between adults and children. It also manifests itself through sensitive interactions and attention to each child's perspective. Throughout the day, several types of interactions can support children in this direction.

- Take the time to **greet** each child by name when they arrive in the morning.
- Put yourself at the child's level to give them a hug and comfort them when they express the need.
- Speak in a **soft voice**.
- Encourage children to **help each other**, taking into account each child's strengths.
- **Validate the feelings expressed** by the children.
- Stay close to **children** who need comforting the most.
- Remain alert and take into account the needs and **points of view expressed** or demonstrated by the children.
- Trust the children by allowing them to take the initiative, by taking an interest in their ideas, and by entrusting them with significant responsibilities.
- Provide enough space for children to move around comfortably.

^{kk} An educator with first-hand experience of nature-based education as part of the *Alex* project

^{ll} Gouvernement du Québec (2018) Guide sur la prévention et le traitement des attitudes et des pratiques inappropriées. <https://www.mfa.gouv.qc.ca/fr/publication/Documents/guide-pratiques-inapprop.pdf>

Examples of emotional support in nature-based education!

- In pairs, the toddlers transport big logs with which they build a path on the floor. They laugh heartily as they run back and forth along the path. If a child hesitates, another child approaches the first one and offers a helping hand. Isabelle, their educator, points out this neighbourly gesture. She approaches the children and sits down with them. A girl comes and gives Isabelle a hug. Isabelle responds with an affectionate gesture and a soft voice.
- When they arrive at the footbridge, where they usually cross the ravine, the children and their educators realize that the bridge is damaged. Kim asks the children what they can do. She enthusiastically welcomes their suggestions: try fixing the footbridge, very carefully cross the footbridge, find a different place for their picnic, etc. In the meantime, Matéo and Julia appear to be looking for something a bit further on. They return, calling out: “We found it! There is a secret path leading down into the ravine and back up on the other side.” After assessing, together with the children, the issues raised by this option, Kim gives the go-ahead for all the children to follow behind their two friends.



2.1.2 Organization of community life

The interactions that support a harmonious and stimulating community life refer to the strategies implemented to support children in their social interactions and in the adoption of appropriate behavior¹⁶⁶. Organizing community life also means providing an environment rich in learning opportunities, by thinking about the organization of time, places and experiences offered.

Working with toddlers in an ECS environment requires a balance between giving individual attention to each child and organizing a harmonious and stimulating collective life. Many educators/HECPs with experience in nature-based education observe that behaviour management is facilitated in a natural environment, where children develop their ability to resolve conflicts between peers on their own. In addition, the emergent curriculum approach makes it possible to minimize the time spent waiting in connection with the preparation of materials and activities, particularly because the natural environment is rich in biodiversity, loose parts, and open-ended materials, and offers a range of opportunities for play and exploration. Finally, the absence of certain time-consuming routines, such as tidying up, seems to allow educators/HECPs to spend more time supporting the children.

Interactions that facilitate community life

While prioritizing free play with supervision, the educators/HECPs devote time and energy to structuring group life, in particular by planning the daily schedule, organizing or choosing the locations, providing materials, and implementing a support plan for children requiring special support. Over the course of a day, several types of interactions contribute to these aims.

- Supporting children in adopting appropriate behaviour and resolving their conflicts, according to their level of development.
- Interact with the children in a way that encourages their commitment and their feeling of belonging to the group.
- Ensure that the day runs smoothly, with flexibility, so as to maximise the time available for play and exploration (long periods of uninterrupted play).
- Avoid interruptions and reduce the time needed to complete organisational tasks, for example by introducing free snacks or reducing the amount of material required.
- Provide children with reference points to enable them to gradually situate themselves in time and space (e.g. a map showing the different places frequented in the community).
- Establish simple rules and instructions adapted to the children in their group.
- Adopt an inclusive approach, i.e. one that takes into account all children, including those who need special support.
- Help children to recognize the richness of the environments they frequent and to see challenges and difficulties as learning opportunities.

Examples of community life in nature-based education

While the children are in the wooded area adjacent to the CPE, a storm suddenly forms. They have to hurry back. Anita still takes the time to gather the children around her to explain what is happening: “I think we’re going to be caught in the thunder and lightning. It’s no longer possible to stay under the trees. I want you to get your backpacks. When that’s done, come and join me.” Anita notices that three children are starting to get excited as they hear the thunder rumbling. She tells them:

“It’s true that this storm that’s fast approaching is exciting. You can watch it from inside. For the moment, I’d like to ask you to get your backpacks.”

On arriving at the base camp, Geneviève gathers the children together. She asks them to state the three main instructions: 1) “I see you, you see me”, 2) “I protect all living things” 3) “When I hear the call of the owl, I stop”. They then set to work, some going to the cauldron (a hollow, empty tree stump) to prepare magic potions, while others lift stones to observe the little critters. When Sacha is about to rip the bark off a birch tree, Geneviève approaches and hoots softly. Sacha stops and, with a smile and a little embarrassment, goes to join his friend Émile to pretend to fight with branches.

2.1.3 Learning support

Child development is a comprehensive and integrated process, i.e. it is supported by a variety of experiences in which children develop in all aspects of their personality. While taking this holistic view of development into account, certain interactions specifically promote the cognitive and language development of young children¹⁶⁷.

Nature-based education is conducive to this type of interaction, as the natural environment offers an ever-changing range of opportunities for creation, questioning, reflection, and dialogue. The adults accompanying the children then have multiple opportunities to support the development of their language skills and their thinking, in particular by inviting them to make connections between different concepts, ideas, or events. These strategies are more promising than the unidirectional transmission of knowledge or information.

Interactions that promote learning support for children

Whether in a natural environment, in the yard, or within the educational environment, there are many opportunities to support children’s learning through nature-based education. While play and exploration situations are favored, these learning support interactions can be deployed at any time of the day and in any setting.

- Explain out loud what you are doing, using precise and rich vocabulary.
- Gradually introduce the names of the different natural phenomena, animal species (e.g. crows, starlings, tits, cardinals, nuthatches, or chaffinches), or plant species (e.g. firs, larches, spruces, pines or hemlocks).
- Create or sing songs and nursery rhymes inspired by the natural world.

- Rephrase what children say, while avoiding systematically correcting language errors.
- Tell stories while interacting with children, with or without a book.
- Have a look at various identification guides or nature reference books with the children.
- Pursue sustained conversations with children; talk to them and listen to them with interest.
- Ask children open questions, rather than questions to which they can only reply with one or a few words.
- Get the children to brainstorm, make hypotheses, plan projects and the steps needed to carry them out. Note these ideas and questions on a blackboard or in a special notebook shared with the children. Make connections between new knowledge and what the children already know.

Some educators/HECPs looking to enhance the quality of the instructional/learning support they offer children rely on a list of sample questions they always keep close at hand (e.g., hanging on the wall in the room or on laminated cards held together with a metal ring). Here are some examples:

- What would happen if...?
- How did you manage to...?
- How could we do it...? How could we find out...? Why is it like that?
- Why do you think that?
- What do you think has happened?
- What is going to happen?
- In what way are these two... similar? Or different?
- What does that make you think of?
- What hypothesis would you use to explain this?

Examples... in action!



It is a winter morning and the children are being welcomed inside the childcare center. The weather is rather harsh: a heavy freezing rain has just fallen. It is very cold outside and all surfaces are icy. Virginia gathers the children for a chat by the window. She explains that it will not be possible to go out this morning. She decides to explain their decision by getting the children to make connections and come up with hypotheses.

Virginia begins: "I noticed this morning that the rain has turned to ice on the ground, in the trees, and on the fence in the yard. Big branches have fallen and electrical wires are broken. I'd like to know what it was like this morning around your house and when you arrived at the childcare centre?" Jude raises his hand and adds: "I slipped. Boom! Pow! On my buttocks!" All the children laugh. Isabelle seizes the opportunity, smiling: 'Oh my! It must have hurt to fall like that! By the way, children, what happened during the night? How come everything is frozen this morning?' Virginia asks the children to take turns to give their hypotheses.

Jennifer and the children are wondering about the constant muffled sound they can hear as they move through the forest.

"What could possibly be making that noise?" "It sounds like an airport! It's really loud!" Justine remarks. Jennifer continues: "Do you find it resembles the noise made by airplanes at the airport? Do you think we can hear that from inside our forest?" Loïc points out that the city's airport is too far from the forest to make it possible to hear the sounds of airplanes. "Maybe it's a bee flying near our ears." The educator reformulates Loïc's idea: "Hmm, I wonder if it could be the buzzing of a bee..." The children discuss among themselves and conclude that the sound can't come from a flying bee. "It's winter! There aren't any bees in the forest in winter!" The educator once again asks them the question: "Well then, what could be making that sound? Is there anything nearby that could be causing it?"

A young boy who was looking at the trees calls out: "It's the wind blowing through the branches!"



2.2 How to encourage high-quality interactions with infants and toddlers

When adults foster a warm and positive atmosphere, are sensitive to the needs of infants and toddlers and value their independence, they lay the foundations for an emotionally supportive environment that encourages infants and toddlers to engage in explorations and learning. Finding themselves in a natural environment is often new for them and can initially trigger paradoxical emotions: fear, excitement, amazement, serenity, etc. Sensitive to these reactions, the educators/HECPs adapt accordingly. One way to help young children become more familiar with the natural environment is to spread a blanket on the ground, thereby creating a base from where the infants can begin their explorations. By remaining close by and sharing the infants' discoveries, the educators/HECPs help them discover the new sounds, textures, odours, and sensations in a trusting atmosphere

Once the infants and toddlers begin moving around in the undergrowth, on the paths, or in the fields, the educators/HECPs observe them with kindness, allowing them to quickly detect their reactions and the ways in which they explore, delight in, and examine the world around. The natural environment is particularly inspiring, and the adult must pay attention to safety concerns: small stones, mushrooms, wide open spaces, etc. When exploring, infants and toddlers must therefore sometimes receive careful and focused support until they have internalized certain safeguards or feel confident enough to explore on their own.

« They often run into problems when dealing with minor challenges in nature. I take the time to support them and get them to feel good and capable. »^{mm} »



Furthermore, educators/HECPs play an invaluable role as providers of reasoning, thinking and language models. They describe what the children are observing or exploring, ask them questions, encourage them to look at the leaves dancing in the wind, etc. Natural environments are perfectly suited for this, as they offer an inexhaustible source of inspiration and opportunity to interact with young children. Even though infants' and toddlers' participation in verbal exchanges, including open-ended questions, will be shorter and more subtle than what older children are capable of, their engagement won't be any less real or significant. Educators/HECPs should be patient and give the children time to respond, they should be attentive to their facial expressions, gestures, and first verbalization attempts. The educators/HECPs should also try to interpret the children's nonverbal and preverbal signs and translate them into words, while adapting to the children's reactions.

Bear in mind that very young children already make use of an elaborate language model that contributes to the development of their thought processes and vocabulary. Educators/HECPs can describe the leaves of the trees the children are looking at, using the actual names of the different species: maple, oak, white birch, etc.

2.3 The facilitation continuum provided by the adult in play situations

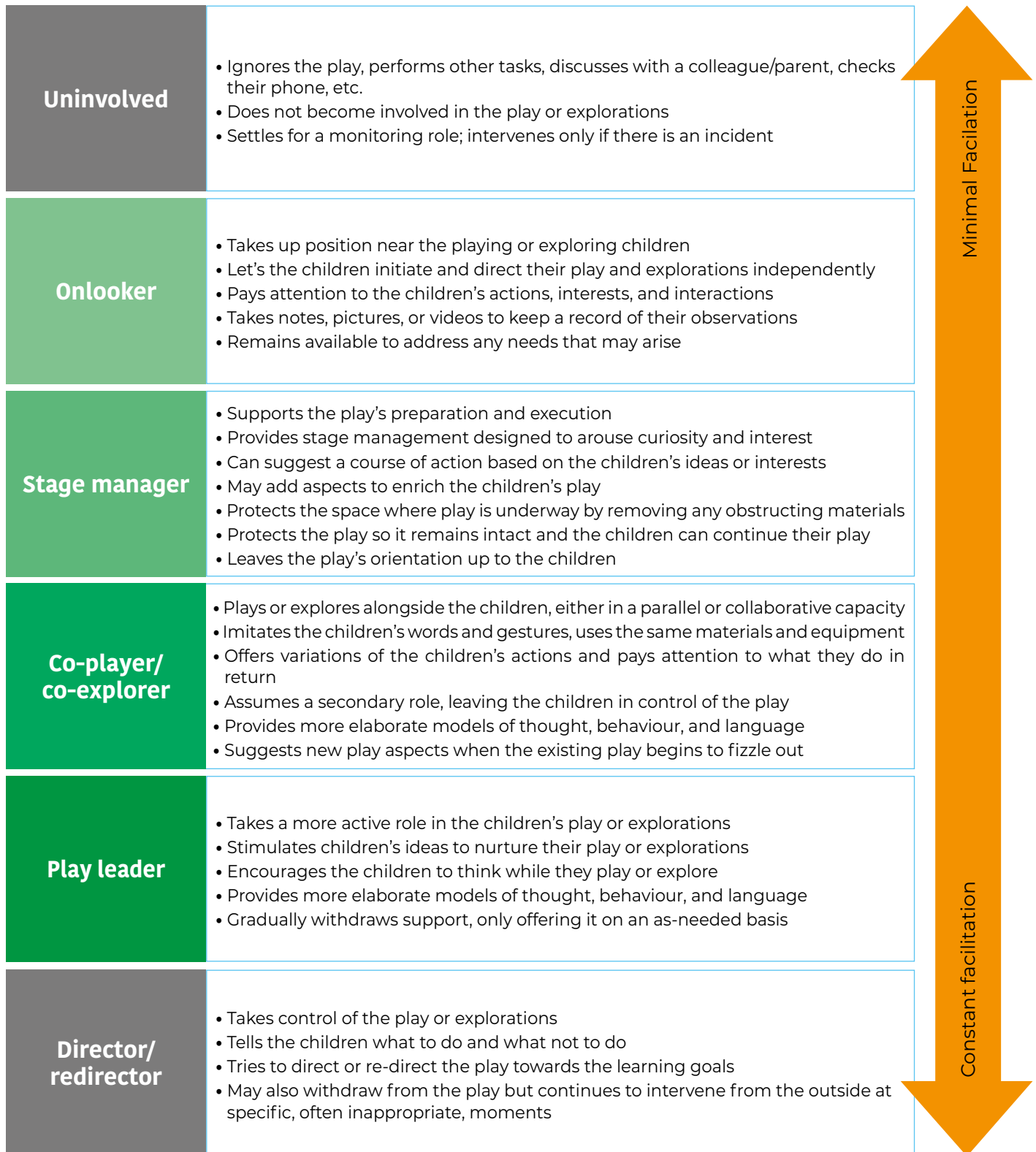
Educators/HECPs who want to improve the quality of their interactions with children can ask themselves several questions: At what point should I interact directly with the child? What actions should I take? How do I position myself? What role do I adopt?

In order to assist ECSs with the integration of high-quality interactions in nature-based education contexts into their daily practice, we suggest adapting the facilitation continuum the adult.¹⁶⁸ The continuum situates six roles that the adult can adopt towards the children as they play or explore their environment. The roles range from no or minimal facilitation to constant or maximum facilitation (see Figure 9). The four intermediate roles or stances are the most beneficial ones when facilitating the children's play. That way, the educators/HECPs, displaying a caring and sensitive attitude towards the children, can move from one child and situation to the next, according to the children's needs, while at the same time respecting their explorations and spontaneous play. Please refer to the figure on the next page.



Fig. 9 Facilitation continuum provided by the adult in play and exploration situations

Adapted from Lemay, Bouchard & Landry (2019)



This facilitation continuum provided by the adult in play situations highlights the roles and stances educators/HECPs may assume over the course of a day, whether this concerns activities in the natural environment or any other moments in life, even beyond play situations. These roles can be assumed with children in all age groups, including infants, toddlers, or older children.

Even though preference should be given to the roles of the observer, stage manager, co-player, and moderator, specific circumstances can sometimes result in the educator/HECP finding themselves in a disengaged or directive role. For example, when it is time to organize space for an outdoor lunch, the educator/HECP may be less involved in the children's games. Being aware of this helps her to quickly reposition themselves, as soon as everyone is settled, in a role that is likely to promote the well-being and learning of the children.

By observing the children, adding certain accessories, sharing in their play and explorations, and even by engaging in the play themselves, the educators/HECPs help create an atmosphere conducive to the children's engagement and learning. They also gain an opportunity to observe the children from various angles, gather new information, and enhance their understanding of the children's perspective.

During a game of hide-and-seek, Caroline notices how young Léo hesitates and then hides beneath the roots of the large oak. Shortly after, she joins him, pretending to be a squirrel that is surprised to find that a little boy has discovered its hiding place. Perking up, Léo explains that they can't make any noise, or else they'll be found. As she starts whispering, Caroline notices that Léo is beginning to contain his excitement and his desire to call out: "I'm here!"



To enhance your understanding, please complete the exercise on p. [200](#)



3. Structuring measures to support the implementation of high-quality interactions

Offering high-quality interactions requires specific skills, as well as the implementation, on the part of the ECS or CO, of a range of individual and collective professional development and support strategies. Several structuring measures may be considered to encourage quality interactions and to ensure that the resulting high-quality interactions are part and parcel of the long-term viability of the ECS's nature-based education project:

- Adhere to a **recognized standard** for best practices¹⁶⁹.
- Devise a plan for **periodic (self-)assessment** of practices, including desired goals and how to attain them
- Develop **concrete tools** to support quality interactions, such as a set of cards illustrating the facilitation continuum, a checklist of open-ended questions, etc.
- Implement **individual and collective strategies** to help guide and support educators/HECPs: observation, team or one-on-one meetings, learning partners, communities of practice, co-development, etc.
- Offer **training sessions/workshops** on quality interactions in nature-based education.



Fourth principle: High-quality educational interactions

Key characteristics

- **Interactions that support the organization of community life**

- Have clear and positive expectations towards children and support their ability to self-regulate
- Organize the course of the day (game, transitions, routines) in a flexible manner, avoiding interruptions
- Stimulate children's interest and commitment by offering them varied, rich, and sustained experiences (environment, materials, etc.)

- **Interactions that support learning**

- Support children's analysis, reasoning, and creativity
- Engage with the children to encourage the development of their thinking skills
- Act as a model for language by rephrasing, using sophisticated vocabulary, singing, and telling stories

- **The four roles that educators/HECPs can adopt to facilitate children's play and explorations:** caring observer, stage manager, co-player or co-explorer and play-exploration leader.

How are each of these characteristics reflected in your own practice? Please situate your ECS regarding this fourth principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

Fifth principle: A close partnership with the parents

Acknowledging, discussing, sharing power, valuing diversity, networking

At the start of the new school year in September, the CPE's educators invite the parents to discuss nature-based education with them, as it is such a central aspect of their education program. The educators kick off the meeting by asking each parent to share an experience connected to nature from their own childhood days.

The discussion that follows is fascinating and illustrates both the diversity and the similarity of their experiences: exploring the shoreline in the Gaspésie region; playing hide-and-seek in the back alleys of Québec City's Limoilou neighbourhood, or in the fields of the Congo; jumping into water holes in Laval, or in a refugee camp in Colombia; helping their dad stack wood, etc. As they reconnect with their childhood emotions, the parents express their enthusiasm for nature-based education, but also raise certain doubts and concerns. The educators welcome these comments, explain the principles of the approach, and describe how they will meet the children's needs.



When one father, who only recently arrived in Québec, voices a concern about his child's well-being during the winter months, another father speaks up and reassures the man, explaining that trees in the forest create small protected spaces that are well-shielded from the wind. An animated discussion follows, as the parents exchange tips on how to enjoy the cold season.

Next, the educators introduce the modes of communication that will be used to maintain the same conversational atmosphere throughout the year. These communications will emphasize pedagogical documentation practices (for further information, please refer to the chapter on this topic on p. 176).

Finally, the educators outline the four participation or implication options available to the parents: the committee responsible for naturalizing the CPE's playground, the shared clothing system for adverse weather conditions, the project for salvaging materials in the community, and acting as parent chaperones during activities in the forest.

1. Why foster a partnership with parents in nature-based education?

The Québec-wide network of ECSs is the result of parents' determination to partner with early childhood education professionals. The parent-ECS partnership evolved over time, changing, at the turn of the 21st century, from co-developers to a relationship between service provider and client. The latest scientific knowledge concerning high-quality early childhood services highlights the importance of collaborative relationships and of the partnership between ECSs and families. The evolution of the foundational principles of the educational program *Accueillir la petite enfance* illustrates these changes.

Extending beyond a mere collaborative relationship, the partnership between families and the educators/HECPs is founded on the conviction that each one has their value and their place in the mosaic that is children's education.¹⁷⁰ The partnership is characterized by the "combined efforts of the professional and the family, both of whom aspire to the same goals. The relationships are founded on shared responsibilities [and] decision-making, mutual trust and respect."¹⁷¹ Several studies¹⁷² have shown that partnership practices involving ECSs and families benefit all stakeholders' development and well-being:

- Children: cognitive and social development, mental health, etc.
- Families: parenting practices, parent-child relationship, empowerment, etc.
- Educators: relationship with the children and parents, communication skills, feelings of competence and self-efficacy, etc.

Above and beyond these direct benefits, the nature-based education approach also recommends forging partnerships with families among its eight guiding principles. Here are the reasons why:

- From an ecological perspective, all interrelationships between individuals and systems are recognized and valued.¹⁷³
- The adoption of nature-based education practices by ECSs can imply major changes at several levels, such as the need for new learning materials and equipment, preferred educational approaches, scheduling times for travelling to the nature sites, etc. To ensure that these changes are universally accepted and remain up-to-date and sustainable over time, they must result from the shared reflections and decisions undertaken by the ECS actors and the families.
- The partnership-based implementation of nature-based education can positively impact the families' experience and perspectives: lifestyle habits (dietary and sleeping habits), perceptions of their child (strengths or vulnerabilities), educational values, ecological awareness, family activities, etc.
- The parents make an invaluable contribution to the implementation process of nature-based education



2. How does one build a partnership with families?

As pointed out in the *Accueillir la petite enfance* education program, the family-centred approach is a recognized frame of reference for fostering partnerships between families and ECSs. This approach aims to further children's development with the support of their families, especially through empowering families' voices.¹⁷⁴

The five principles of the **family-centred approach**—presented here¹⁷⁵ find application in the implementation of nature-based education.

2.1 Recognizing and respecting one another's knowledge and expertise

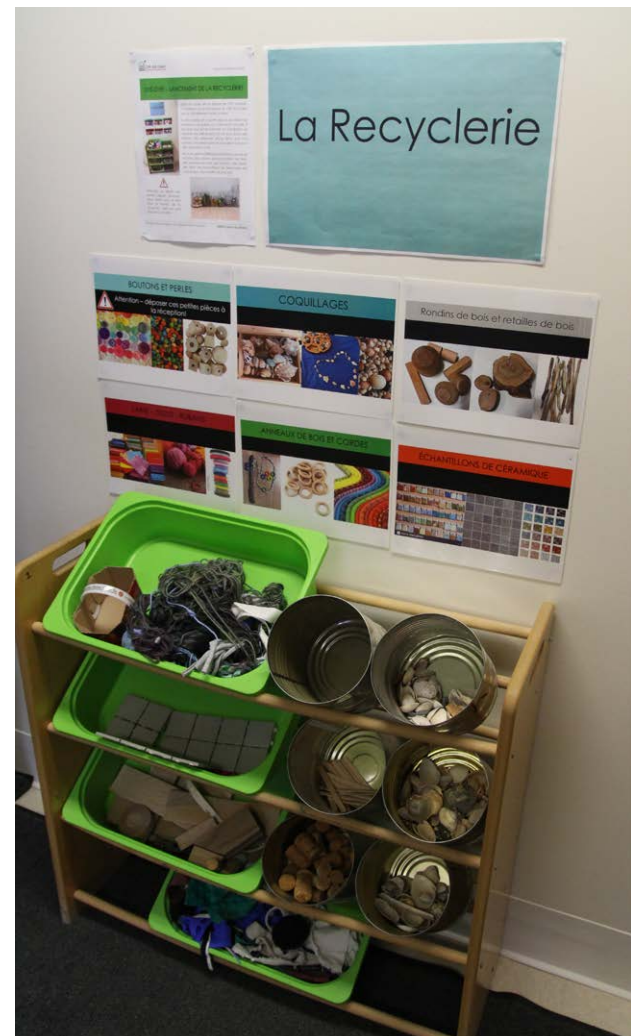
One of the assumptions underlying nature-based education is that both parents and early childhood education professionals possess invaluable knowledge concerning children and their education. Nevertheless, the following is a common stance:

« [Even though] the educators recognize the significance of the role played by the parents, (...) they prefer that the parents' input remains somewhat limited (...) so as not to interfere with the education program. (...) The educators feel that the parents lack the necessary knowledge in connection with children's development. »¹⁷⁶

The educators/HECPs need to examine how they perceive the parents, as their perceptions directly impact their practice. By reflecting on their own preconceptions as well as their capacity to recognize the expertise of all parents, educators/HECPs pave the way to a genuine partnership. Not only is knowledge on both sides of the equation mutually complementary, sharing knowledge between parents and education staff is essential for the level of care and support children require.

In the specific context of nature-based education, the mutual recognition and respect of expertise touches on two distinct spheres.

- The sphere encompassing children and their well-being and development in nature-based education contexts:
 - The children’s state of mind in relation to the natural world
 - Their sources of curiosity and wonder
 - Their responses to challenges
 - Their fears and apprehensions, their vulnerabilities Their budding skills
 - Their autonomy and independence, their capacity to resolve problems, etc.
 - The place nature occupies in the children’s lives
- The sphere encompassing the nature-based education implementation plan:
 - Construction of shelters, large wooden blocks, etc. Outdoor knowledge and experience
 - Knowledge of fauna/flora/fungi Understanding of ecosystems
 - Nature-based education approaches and history
 - Facilitation provided to the children during activities in the forest
 - Inclusion of children with special needs
 - Skills locating salvaged materials



2.2 Fostering two-way communications

Two-way communications consist of frequent and regular dialogue between parents and the educators/HECPs/ECSs about the children and the nature-based education program, thereby enabling the emergence of a shared vision. Creating a reciprocal dynamic serves to stimulate sensitivity and curiosity in both parties, making it possible to compare perceptions and corroborate the shared understanding in connection with the children, and guide the joint choices of strategies and interventions to adopt with the children.

Before embarking on a nature-based education project, it is strongly recommended to discuss with parents and continue this dialogue for the duration of the experience. It is useful to find out how the parents perceive and regard nature-based education, how they expect their children to react, and what their own experience of nature is. Adopting this approach makes it possible to clearly understand the various perceptions, and, if necessary, make adjustments. In the example provided at the beginning of this section—concerning the parent who only recently arrived in Québec and was particularly concerned that their child would suffer from the cold in winter—the educator took the time to meet with the parent one-on-one and check whether the family-owned warm clothing, and, if not, how they could be assisted to obtain some.



The parents and educators/HECPs are in perfect alignment concerning the best way to create this two-way communicative atmosphere: through direct contact and by showing a genuine interest in the parents' perspectives during their daily exchanges as well as their one-on-one meetings.

There are some further strategies for capturing and recording the parents' perspectives. For example, the *Alex—Éducation par la nature* research project surveyed the parents of 20 ECSs to gather their perceptions of their children's experiences. Some examples of what they had to say follow below:

« My daughter is aware of her environment, curious about new things, and initiates discussions on a range of subjects to relate her discoveries in nature to us. She has become more independent and adventurous. »ⁿⁿ

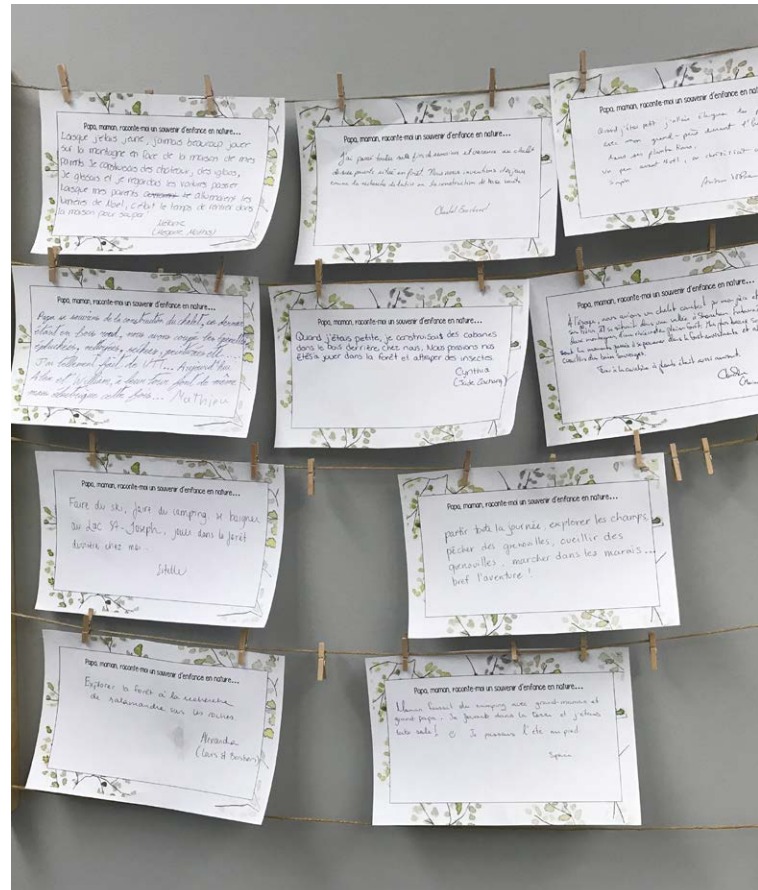
ⁿⁿ A parent who participated in the *Alex – Éducation par la nature* research project

« My son didn't get a lot of opportunities to spend time in nature before this experience. Now he's a lot more interested in trees, vegetation, and birds. We can sense his confidence when we go out into nature. He wants to show us things! We can sense that he is at ease. He has also become better at managing risks.”^{oo}



Suggested strategies to help maximize points of contact and exchanges with parents

- Interactive online platforms that allow for instant feedback
- A survey to collect the parents' perceptions
- Booths for distributing and sharing information about nature-based education
- Bulletin board for posting questions addressed to the parents
- Group binder placed in the changing room into which the parents are encouraged to write
- Vox pops or invitations to voice opinions
- Parent-educator meetings (group, sub-group, one-on-one)
- Featured stories from the children
- Pedagogical documentation, meaning records (photographs, videos, documented observations, creations, etc.) of the children's daily adventures, which can serve to stimulate discussions with their parents (for further information, please refer to the chapter on pedagogical documentation on p. 176)



^{oo} A parent who participated in the Alex - Éducation par la nature research project



2.3 Sharing power and decision-making

The family-based approach is founded on shared empowerment. The parents and educators/HECPs participate in the decision-making processes concerning the children and the entire educational environment. Sharing power with families requires that the education professionals examine their perceptions of the partnership generally, as well as their individual relationships with each of the parents. Are they prepared to accommodate the parents' concerns and ideas in relation to the nature-based education project and take these into account when organizing services? Are they open to jointly seeking solutions that address the

apprehensions expressed by some parents regarding shared risk management in the natural environment? In trusting the parents, educators agree to make the best joint decisions for the children on a daily as well as long-term basis.

The sharing of power between families and education professionals can find expression in the situation of one child, or it can encompass the entire nature-based education project.

Suggested strategies for involving parents in power-sharing and decision-making processes

- Take on the role of an administrator on the board of directors
- Join a working committee and contribute to the reflections on naturalization of the outdoor play space; what materials to reuse/purchase; the designated sites for activities outside; the ECS's aspirations in connection with nature-based education, etc.
- Participate in activities in the natural environment with the ECS's support to identify the role parents can play and raise their awareness concerning emergent curriculum
- Be an active participant in reflection and discussion meetings to voice questions, or express enthusiasm or concerns
- Lend a hand with improving the layout of the ECS's premises and with the chosen natural site, or with material inventory, and nature exploration projects, etc.
- Raise awareness and mobilize other parents
- Become involved in decisions associated with the logistics and execution of activities in the natural environment: equipment, scheduling, special needs management (illnesses, socio-emotional challenges, etc.)



2.4 Acknowledging and respecting diversity

To become culturally competent professionals—meaning being prepared to positively interact with all families in educational settings—the educators/HECPs should get to know and respect the families’ diversity (Pedro et al, 2012).¹⁷⁷

Nature-based education isn’t meant only for nature fanatics and true believers; on the contrary, it benefits all children and families. Above and beyond sociocultural and economic diversity, nature-based education produces a better understanding of each family’s nature-related experience and perception.

Some families are excited by nature-based education because they regularly go camping in natural environments. Others have no experience of nature or may fail to see the educational value of activities in nature for their child, or even view them as dangerous or inappropriate. It is important to listen to and accommodate such perceptions and experiences. Two-way communication is an invaluable tool for understanding how these perceptions and experiences affect the children’s and parents’ relationship with nature.

Time is a useful ally for taking the edge off the doubts of the most worried families. Often families need time before they can feel comfortable with nature-based education and can appreciate its effects on their children, or even on themselves! The approach doesn’t always meet with unanimous support from the outset. However, accommodating parents and their different perceptions, at whatever stage in the process they may be, and raising their awareness and showing off advances made will allow everyone to proceed at their own pace.

Contrary to what ECSs may presume, very few parents initially have reservations about nature-based education. In fact, recent experiences in Québec speak for themselves. Parents sometimes have questions concerning safety issues, well-being, and educational value. But when they get the opportunity to see their children experience a complete yearly cycle of nature-based education, any remaining fears or differences of opinion give way to enthusiasm and the recognition of the many inherent advantages for the children and their families.^{178,179}

« Even though the experience wasn’t necessarily easy for him (difficult transitions, disrupted routine, etc.), it ended up being more than positive. He has become resourceful, curious, and fearless when we go to the forest. I can see how at ease and at home he is. He tells us about his experiences this winter and how proud he is of them »^{PP}

^{PP} A parent who participated in the *Alex - Éducation par la nature* research project

Suggestions for how to respect and value diversity

- Become familiar with the circumstances of the families your ECS serves;
- Consider the socioeconomic situation of the families served by your ECS. For example, assess how realistic it is to ask them to purchase special items, such as waterproof clothing. Or else, think of ways to share the responsibility between the ECS and parents, for example by setting up a clothing swap from one generation of parents to the next, or working together with organizations serving your neighbourhood. Some ECSs decide to purchase sets of waterproof clothing and loan them to the children.



- Adopt policies geared towards inclusion of all families.
- Pay careful attention to ensuring broad representation, i.e. make sure photographs, videos, and examples used during exchanges with families concerning nature-based education are representative of the diversity of families served by your ECS.

2.5 Creating networks of support

Setting up support networks that enable families to support each other can serve as an invaluable resource when introducing nature-based education. Whether it concerns anxieties about outdoor sessions in the rain, equipment needs, or questions around safety issues or how to prepare their children for school, encouraging parents to support one another should be a priority.

Although the ECS constitutes a focal point and gathering place for families, this does not necessarily mean individual families will connect with each other. Parents may cross paths in the change room, the playground, or the hallways, but such contacts may be fleeting and superficial, especially without the input and leadership of the educators/HECPs or the ECS. The childcare facility can help broker connections, partnering, and mutual assistance opportunities between parents. This can help families feel more confident, better understood, and less isolated. The creation of these support networks, whether formal or informal, can also help families feel more grounded in the community—such as when one parent suggests to another to go to the community-run second-hand clothing store together and look for clothing items that are suitable for northern winters.



Suggestions for fostering support networks that build connections between families and within the community

- Organize formal and informal meetings, for example:
 - Hold the AGM in a natural/outdoor environment, or showcase photographs and videos that illustrate the children’s experiences, along with a designated opportunity for families to respond and discuss with one another
 - Hold a meeting in the natural environment at the start/end of the year
 - Plan special excursions into the natural environment for the families
 - Set up a space where the parents can gather for spontaneous discussions when crossing paths indoors or outdoors
- Develop strategies for welcoming new families and partnering them with an experienced family (mentorship)
- Set up a system for sharing and swapping clothing and equipment
- Find out and spread the word about family activities and resources in the neighbourhood



To enhance your understanding, please complete the exercise on p. [205](#)

3. Structuring measures to support the implementation of a partnership dynamic with parents

Structuring measures can be useful for supporting and guiding the ECS staff’s interactions with families when introducing nature-based education. Some childcare facilities may be tempted to introduce prescriptive measures for families to follow, or exclude families openly hostile to activities in natural environments. However, structuring measures are aimed to foster and support the long-term viability of the partnership with parents. As such, they should be designed to build positive alliances around the nature-based education project.

Some suggestions:

- Develop a document on an introduction to nature-based education and make it available to families
- Add an appendix to the ECS’s childcare services agreement, outlining the main aspects of the project
- Add a brief section to the governance structure in connection with nature-based education
- Set up an advisory committee, including family representatives, to monitor the implementation of nature-based education
- Develop strategies for welcoming and guiding new families by an experienced family (mentorship)
- Establish a policy of inclusion (please refer to the chapter on inclusion on p. 186)
- Allow for opportunities for discussion during team meetings, focused on the perceptions and practices concerning the partnership
- Etc.



Fifth principle: A close partnership with parents

Key characteristics

- **Recognize the parents' skills and expertise:**

- Let every family know that they are recognized as possessing invaluable skills and knowledge that are essential to the nature-based education project, benefitting their children as well as the ECS

- **Foster two-way communications:**

- Bulletin boards for posting questions addressed to parents
- Closed virtual discussion groups, exchanges by email or text messages
- Survey, vox pop, or other strategies for consulting with parents
- Meetings in the fall to get to know one another and share concerns, etc.

- **Share power and decision-making:**

- Working groups, for example regarding the naturalization of the outdoor play space
- Implementation or steering committees concerning nature-based education at the CPE
- One-on-one meetings between parents and their child's educator/HECP to decide on an intervention plan, as needed

- **Acknowledge and respect diversity:**

- Post images or first-person accounts that reflect the diversity of family experiences and contact with nature
- Establish a policy of inclusion regarding children with special needs
- Reflect the diversity of experiences in the pedagogical documentation distributed

- **Create networks of support:**

- Meetings where parents can introduce themselves to each other Partnering of parents
- Systems for sharing equipment
- Spread the word about available resources in the community: nature parks, green back alleys, recycling depots, etc.

How are each of these characteristics reflected in your own practice? Please orient your ECS regarding this fifth principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

Sixth principle: Collaboration with the community

Placing nature-based education at the heart of a community project

The Grandir en nature à Laval project took root in fertile ground. For the past several years, various actors in the community, concerned about the welfare of young children, forged partnership links and developed projects with their partners. The CPEs/COs, CISSS/CIUSSSs, municipality, community organizations (including the Clubs 4-H du Québec), educational service centres and foundations got to know one another and developed a common vision, concerning the promotion of free and active play among other things. These organizations have well-established collaborative and partnership practices.

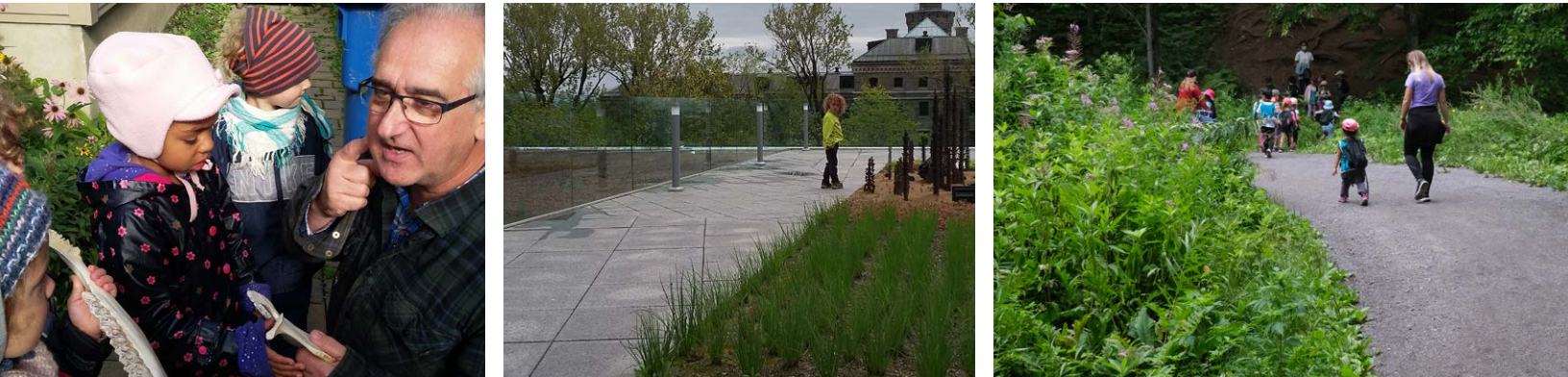
In the fall of 2019, an educator, aware of the potential of nature-based education, got in touch with Clubs 4-H du Québec. It was an opportunity to get a few collaborators involved, to set up a working committee, bring experts on board, and look for funding opportunities. Before long, the idea had taken shape, leading to the foundation of the Grandir en nature à Laval project.

This sixth principle emphasizes the importance of close collaborations with the community when implementing nature-based education. The *Grandir en nature à Laval* and *Grandir en forêt à Limoilou* projects are two excellent examples of this. Encouraged to join forces around common objectives and push for desired practice changes, the community actors and ECSs found common ground. As such, they now contribute to a rich and supportive environment for young children.



1. Why collaborate with the community in nature-based education?

The community is an important actor in the construction of children's identity. The ecological model advanced by Bronfenbrenner¹⁸⁰ décrit l'interdépendance entre l'enfant qui se développe et son environnement. Lorsque le SGÉ s'engage dans une collaboration avec la communauté, cette dynamique favorise l'**accès à une diversité d'environnements humains, artistiques, architecturaux et naturels**. L'enfant y explore ces divers univers et y découvre des modèles, des intérêts et de multiples sources d'inspiration et d'émerveillement.



The community gains something as well, namely the **recognition of the importance of young children and childcare facilities** within it, as evidenced by the *Carrefour action municipale et famille du Québec*: "... which shows that collaborations between municipalities and educational childcare facilities remain a source of untapped potential. However, such collaborations could also produce positive impacts for the entire community."¹⁸¹ This collaborative vision of the relationships between young children, families, and the community draws on the approaches from the Tuscany and Reggio regions in Italy¹⁸²⁻¹⁸³ as well as the community-based or place-based approach.¹⁸⁴ Closer to home, indigenous communities view children and their learning as solidly anchored in the community and in culture and nature. Among other things, this finds expression in the heritage being passed down by elders and in the importance placed on children mirroring adults.¹⁸⁵

Briefly stated, why should close collaborations between ECSs and the various actors in their community be encouraged when implementing a nature-based education project?

- To recognize the importance of young children within the community
- To facilitate access to natural environments and other interesting sites
- To facilitate getting to and from the chosen sites
- To encourage fertile connections between different groups within the community
- To facilitate the sharing of expertise
- To enrich children's social and cultural experiences

In many cases, community mobilization is essential to ECSs' efforts to implement nature-based education, especially when it includes spending time on sites that do not belong to the ECS. As it happens, the search for sites that are readily accessible and where children can spend extended periods of time immersed in a natural environment often leads to the same realization: The natural spaces located in the neighbourhood of most ECSs tend to be owned by the municipal authorities (two out of three sites—according to a 2019 survey of 500 ECSs).¹⁸⁶ As such, municipalities are indispensable partners.

2. How does one collaborate with the community?

Opportunities for collaboration may arise spontaneously. For example, bird-watching enthusiasts may cross paths with a group of children and their educator near a marsh. These chance meetings may lead to a wonderful relationship built on sharing and exchange. The children can offer their curiosity and amazement, while the “zooms” (referred to as such by the children on account of their impressive photographic equipment) can introduce them to the fascinating world of birds.



On the other hand, building collaborative relationships usually takes some time. Inter-organization alliances require a more formal approach. What this means for ECSs is that they need to know their community, assume their place within it, and identify potentially productive areas for collaboration. They must then engage the actors, discover points of convergence, and plan and implement their shared actions. They can then conclude with an assessment of the outcome before moving on to the next project or the next phase in the collaboration.

2.1 Knowing your community

Getting to know the environment in which the ECS is located opens the door to discovering a wealth of resources and identifying potential allies to support the implementation of nature-based education.

Among other things, it is important to get to know the people living in the area, the territory, the organizations active there, etc. A person who is well-acquainted with the ecosystems and the biodiversity in the natural spaces the children spend time in, is a very precious resource.

The parents served by the ECS can be helpful in identifying these resources, particularly through their jobs or recreational activities. Several aspects are worth mentioning here:

- The sociodemographic and cultural characteristics of the individuals, families, etc.
- The characteristics of the territory (neighbourhood, borough, village, county etc.)
 - The territory's development: ownership and occupation, traffic routes, etc.
 - Natural spaces: accessible sites, the sites' owners/managers, etc.
 - The different habitats and ecosystems
 - Municipal by-laws and regulations



- The community's resources:

- Municipality or borough: services, resource persons (is there a preferred contact person?), available support options, such as *Accès loisirs*, public and active transportation, library, etc.
- Material resources: recycling depots, artisan's workshops, factories, etc.
- Human resources: volunteer centre, schools, cégeps (colleges), or universities (programs in early childhood education, preschool education, ecology, outdoors, etc.)
- Financial resources: funding agencies, crowdfunding, etc.
- Cultural resources
- Sustainable development resources, land protection resources, environmental and eco-citizenship education resources
- Consultative bodies and mobilization forums: neighbourhood council, early childhood group of partners, etc.
- Private/public neighbourhood: schools, community centres, businesses, citizens, etc.
- Training and facilitation resource⁹⁹
- Other users of the targeted or visited natural environments: neighbourhood children/adolescents, clubs devoted to birdwatching or mushroom foraging, sports enthusiasts, artists, etc.



2.2 Getting yourself known, assuming your place in the community

While it is crucial to know your community and its available resources, it is just as important to help your community and its various actors get to know your ECS and its nature-based education project. Do not take for granted that your potential partners are thoroughly familiar with nature-based education. Take the time to explain its underlying principles, relate situations experienced by the children, make the parents' perceptions known, etc.

In a public park, an HECP shares the site with cross-country skiing enthusiasts. When they learn that the HECP is making sure that the young children don't tread on and damage the ski trails, the skiers feel reassured and are open to engaging in dialogue with them. And who knows, this may soon be followed by exchanges and discussions of the discoveries the two sides have made in this natural environment!

⁹⁹ For example, *Coop Enfant nature*, *Environnement jeunesse*, *Le lion et la souris*, *Forest School Canada*, etc.

Several actions may be considered in connection with this issue:

- Tour the community and organizations in the neighbourhood with the children
- Contact the individuals who frequently spend time at the natural sites, to discuss everyone's expectations and goals in connection with using the space
- Invite community members to an open-house event at the ECS or the natural space visited by the children
- Invite community members to an awareness-raising activity concerning nature-based education (conference, picnic, etc.)
- Meet with each targeted actor to present the ECS's project

In an effort to minimize travelling time to natural areas from the CPE, the educators identified a path that passes through some citizens' private property. One educator presented the project along with a request to be permitted to use the path with the children. Not only were the children warmly welcomed, but one citizen also decorated the trees lining the path for the children's benefit.

- Regularly update the ECS web page
- Set up a newsletter or bulletin board in the neighbourhood or in select locations
- Share a poster or banner introducing the project outside the ECS or at the sites visited (at the base camp or site entrance)
- Encourage children's and ECS's participation in various activities in the community: family festivals, trail clean-up, park landscaping projects, etc.

2.3 Planning actions to ensure harmonious collaborations

To ensure that collaborations between an ECS and community actors benefit everyone, it is advisable to plan, even if only briefly, the actions to implement. For the ECS, it is primarily a matter of **specifying its needs, identifying priorities, and clarifying the desired goals of any potential collaboration**. For example, obtain the right to visit and spend time in the neighbourhood nature park, secure the support of a nature expert or of volunteers, etc.

The ECS may consider joining together with other ECSs and COs/HECPs in the area that share an interest in nature-based education, thereby enhancing their collective clout. To decide on a strategy and communicate with potential partners, the ECS can use tools and guides developed in Québec.¹⁷

¹⁷ The following links are available in French only: [Taking care of our world](#): Please explore: [6 tips for enhancing your interactions with municipal officials](#) [Projet Espaces](#), Among other things, please explore: [Naturalization of play spaces](#) to suggest to your municipality, and Helping your municipality to "[gain a thorough understanding of your environment](#)" " In Québec, we move around outdoors – Advice concerning the outdoors . Please explore: "What nature contributes to communities" p.29
[An educational childcare facility putting down roots in the community](#) – Please explore: Self-assessment grid concerning the relationships between municipalities and educational childcare facilities, p.31

Once the goals have been determined, you will need to elaborate joint action plans (impacts, strategies, actions, indicators and targets, timelines, and the respective contributions of each partner), which may serve as blueprints for long-term collaborations. For example, an environmental protection agency develops an agreement with the ECSs in its territory to offer the educators/HECPs ecosystems training.

« We ran into a few challenges, but we managed to overcome them! At first, we had big ideas and ambitions! We had to set our priorities on a timeline and step up the organization of our team of partners. We wanted to get everything done quickly, but we had to scale back the pace so we could work together more effectively. Collaborating with several partners requires that we carefully manage the feelings and sensibilities of everyone involved (including our own ECS) and agree on certain concessions! If you want to come to an agreement, you have to consider everyone's opinion in order to reach the best decision! »⁵⁵

2.4 Implementing the agreed actions and assessing the collaboration

The implementation of actions is at the heart of any collaboration, allowing the project to take shape. The collaboration must be supported by a few assessment strategies, which may be applied on an ongoing basis or at the conclusion of a cycle. The assessment is meant to take stock of the project's progress, impacts, and collaborations. It makes it possible to learn from mistakes, celebrate positive outcomes, etc. It is important to document the assessment process.

Suggestions for assessing the collaboration

- Periodic review of the actions' progress and the attainment of goals
- Online surveys or questionnaires, vox pops, or group interviews
- Photographs and videos illustrating the collaboration outcomes
- Official communications, reports, etc. It is possible to contact local media to showcase the collaboration
- A thank-you evening/celebration



enhance your understanding, please complete the exercise on p. [207](#)

⁵⁵ An educator with first-hand experience of nature-based education as part of the Alex project

3. Structuring measures to support the implementation of collaborations with the community

Several measures may be considered to ensure that the ECS's collaborations with the community can remain viable over the long term:

- Add statements to your **education program** that stress the importance of collaborating with the community and outline what practices to implement
- Develop a **project overview** document for community actors that describes the ECS's nature-based education project
- Update the ECS's **website or Facebook page** to showcase nature-based education
- Participate in a **round-table discussion** that includes various partners in the community and contribute to the development of a joint action plan
- Develop a joint **action plan** with your partners
- Sign collaboration and service **agreements**
- Devise **strategies for assessing** collaborations



Sixth principle: Collaboration with the community

Key characteristics

- **Getting yourself known and finding your place in the community:**
 - Raise awareness among the community actors about the nature-based education project and the importance of early childhood education
- **Knowing your community:**
 - Discover the many natural, human, material and other resources in your community
 - Identify potential partners for implementing the nature-based education project
- **Identify the needs that may be addressed through collaborations or more formal agreements**
- **Planning actions:**
 - Clarify mutual goals
 - Determine what actions to implement collaboratively
 - Decide on everyone's role
- **Ensure follow-up and assess the actions:**
 - Carry out ongoing assessments with the partners, including their perceptions of the collaboration
 - Document your assessments
 - Take stock of the actions, celebrate the results, and learn from your mistakes

How are each of these characteristics reflected in your own practice? Please orient your ECS regarding this fifth principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

Seventh principle: A balanced approach to risk and safety

Enhancing the role of acceptable risk-taking

After the heavy rain, snow, and big drop in temperatures last night, this morning the forest is transformed: The trees and shrubs are coated in frost and snow, and the bodies of water have become real skating rinks. Geneviève watches the children, who are fascinated by this universe of snow and ice. She pays attention to how they account for risks associated with their play. They wander from one place to the next, as they test the creaking layers covering yesterday's water holes—with a branch, or with their boots. Pleasure, analysis, and caution are all apparent.



When the children reach the creek, some of them run off. Geneviève briefly loses sight of them. She produces a sound imitating the call of the northern barred owl. The children stop dead in their tracks and return towards Geneviève, as it is their agreed signal for gathering together. When they have all returned, Geneviève tells them: “All right then, the forest is wonderful and fascinating today! But we must also respect our watchword: I see you, and you see me...”

She then asks the children to calmly approach the creek, while staying close to her. “Why would you like to walk or jump on the ice covering the creek? In your opinion, is that possible? What are the risks?” There is a lively discussion, and the children come up with criteria to analyze the situation. To conclude, they are going to carry out tests and agree that while the ice seems very solid near the river bank, they can't be sure what it is like in the middle of the creek. They agree that they won't go near the central part, where the water is flowing beneath the ice, and that they are going to crawl on all fours on the river bank.

Building on the children's initiatives, nature-based education encourages situations where the children engage in potentially risky actions: running through undergrowth littered with dead branches, climbing up a sloping tree trunk or onto large rocks, playing hide-and-seek beneath bulrushes, etc. Young children taking acceptable risks is valued, as long as it lives up to the principles of a balanced approach to risk and safety.

1. Why embrace the concept of a balanced approach to risk and safety?

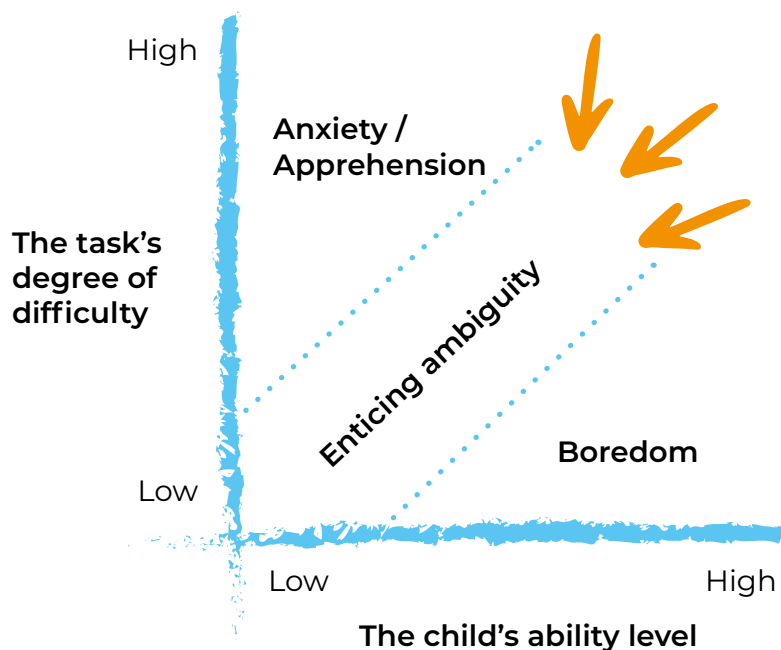
Québec society takes the well-being of its young children to heart. Nevertheless, the zero-risk approach that prevailed in recent decades has had its limitations. By attempting to eliminate all situations liable to include risks, the approach is believed to have contributed to a decline in physical activity, enhanced sedentariness, and other physical and mental health problems among children.

In response to these major issues, the concept of a balanced approach to risk and safety offers a promising new model. A balanced approach represents the attitudes and practices that seek to preserve children's health and well-being, while also agreeing to a measure of acceptable risk-taking. The formula refers to the balance between a preventive approach and the value associated with acceptable risk-taking, as well as shared responsibility between adults and children, because it is in the children's best interest.

1.1 Recognizing that acceptable risk is a powerful tool for whole-child development

Young children love a good challenge. They yearn for the enticing ambiguity they experience in the face of a challenging situation.¹⁸⁷ This is the emotion children feel when they engage in an action that is just beyond their existing abilities, representing an engaging and realistic challenge for them, without giving rise to anxiety. The **enticing ambiguity zone** describes that optimum space of imbalance, in which children decide to take up a challenge. This goes hand in hand with the zone of proximal development. When children take an acceptable risk, they voluntarily position themselves in the enticing ambiguity zone, as shown in Figure 10.

Fig. 10 The enticing ambiguity zone. Adapted from Brunelle, Godbout, Drouin & Tousignant, 1988.



By moving along the sloping trunk on her knees and then on her hands and feet, young Leila pushes beyond her physical, cognitive, and emotional limits. She feels proud and wants to do it all over again.

Acceptable risk-taking constitutes a powerful development tool for young children. They develop self-protection strategies, which will be useful to them throughout their lives: how to position themselves to maintain their balance; where to hold on for stability; how to react in case they fall, etc. By engaging in adventurous play, children develop their analytical capacity, confidence, independence, and motor skills; all of which are major components of their learning.

Every child is unique and develops at a different rate. The same is true for every context. As such, several factors may contribute to whether a risk is deemed acceptable or not: the child's physical/cognitive abilities and emotional state, the weather conditions, type of environment, intervention options, the facilitation provided by the adult, etc.



Natural settings constitute environments in which the risk of injuries is present: water bodies, uneven terrain, branches and other debris on the ground, etc. A study that looked into incidents occurring in natural environments nevertheless found that this risk is very limited (please consult the chapter outlining the key research findings on p. 20). Indeed, the risk may be avoided, reduced, or mitigated by the adoption of responsible practices: familiarity with the environment, clear instructions, behaviour adjustments, etc. Nature-based education recognizes and values the presence of certain risky situations, while also making sure young children remain safe.¹⁸⁸



Many researchers in Québec¹⁸⁹ and elsewhere in the world¹⁹⁰ advocate for a return to environments and to attitudes (on the part of adults and organizations) that encourage risk-taking as an integral part of children's development. More specifically, they make a case for reforming current policies and practices that often rein in children's momentum and their appetite for risky play.

According to the Pan-Canadian Public Health Network (PHN), access to active play outdoors and in nature, along with the risks these entail, is essential for children's healthy development. As such, the PHN recommends concrete changes to the legal frameworks, organizational structures, and institutional decision-making to ensure the best-possible development opportunities are available to Canada's children by extending the time periods spent engaging in unstructured outdoor play.¹⁹¹

2. How does one implement a balanced approach to risk and safety?

2.1 Adopt a common language around safety concepts in your ECS

From the outset, it is important to nail down and agree on the meaning of the concepts associated with safety issues. The following concepts are briefly defined in the glossary on p. 10: safety, a balanced approach to risk and safety, hazard, risk-taking, and acceptable risk. You may find it useful to refer to these definitions.

Let us take the example of Bruno, a young child, who decides to climb the sloping trunk of an old oak tree. The hazard lies in the height of the trunk and the presence of a rock on the ground below. The risk is constituted by the possibility of slipping and falling and getting hurt in the process. The risk-taking involves Bruno's decision and action to climb the trunk. The acceptable risk is the result of the analysis carried out by Bruno and his educator: Bruno feels confident, he has climbed similar heights before, he knows how to get back down and how to maintain his balance, the oak tree's trunk and bark are solid, and the rock on the ground below can be moved.

ECSs are encouraged to acquaint themselves with these definitions and discuss them with their team and with parents. Speaking the same language ensures a common understanding of the vision as well as the consistency of the actions implemented towards the goal of a balanced approach.

2.2 Share the management of safety issues

Key to the recommended approach of managing risks in nature-based education contexts is the shared management of safety issues. Even though it goes without saying that adults and organizations play a vital role in ensuring the children's safety, children are also part of the equation, as they are the primary actors in the development of their sense of self-protection and the skills associated with it. What they learn will serve them throughout their lives.

As a child's development progresses, the responsibilities are increasingly shared between the child and adult.

2.2.1 The children

During the first few months of their lives, babies are highly dependent on adults for looking after their safety needs. As they develop and accumulate experiences, they gradually take charge of their safety, thanks to a set of analytical, adjustment, and self-protection behaviours.

It is less a matter of learning a set of skills or specific behaviours, than of developing their ability to consider and analyze the characteristics of each situation, including its constant evolution: their bodies change as the months and years go by, the weather conditions change, contexts keep changing, etc.



Every situation involving acceptable risks constitutes a learning opportunity

When Malika steps onto the wet wooden footbridge, she analyzes the situation based on the visible indicators (the wood is shiny) and sensations (it is slippery). Having experienced a mishap before on a wet patio, she has to overcome her fear of falling and muster up her courage. Finally, she adjusts her posture as she moves along: a little stooped at first, she gradually adjusts her positioning by stretching out her arms on either side of her body, ready to react in case she stumbles.

Who decides if a risk is acceptable? The children decide for themselves—with the support of the educator/HECP—whether or not they are ready to tackle a challenge. Of course, adults are in a position of responsibility and need to supervise any situations that are new or involve risks that are difficult to recognize by the children. However, as the children’s overall skills become more complex and their experiences more diversified, they are also better able to estimate the magnitude of a given challenge and their ability to tackle it.

The children’s temperament may also influence their risk-taking. Some children exhibit adventurous or gutsy behaviours. Others tend to be more apprehensive and cautious. Different children will make different choices. The important thing is to help them evaluate the context, recognize their own concerns, and set realistic and stimulating goals for themselves. When the approach to a challenge is freely decided, the children know how to act wisely and proceed in stages, as demonstrated by Judy, who decides to use her hands to help herself climb down from the large rock.

2.2.2 The educators/HECPs

Rather than avoid all risky situations for children, the adults’ role is to support children when they assess and manage risks, while considering the potential pitfalls and benefits connected to the situation. Responsible adults don’t downplay the risks and safety issues associated with playing in natural environments. **They have a duty of safety towards the children and are constantly looking to find a balance between the potential rewards and the risks of injury that can result from the children’s play and the environment.**

Support children when they assess and manage risks



Adults' perceptions and attitudes towards risk-taking have a major influence on the possibilities available to children to take risks that are acceptable and necessary for their development. Some educators/HECPs report that they sometimes feel like they are caught in a bind: Should they prioritize the children's development or make sure they are safe? They want to encourage risk-taking for its developmental benefits but are reluctant to grant children the required independence. This apparent toss-up between development and safety is rooted in the faulty perception that risk-taking equates to an injury, which, in turn, creates tensions regarding how to manage risk-taking. The balanced approach lets you do both!

The adults' perceptions and attitudes influence children's risk-taking

To **bolster their sense of confidence** concerning the shared management of a balanced approach to risk and safety, the ECS's staff and parents are encouraged to reflect on their beliefs and perceptions so they can develop the skills and practices to implement with children on a daily basis. Advancing from "zero risk" to a balanced approach, based on an appreciation for and the shared management of acceptable risk, requires time and multiple experiences--no doubt including many scrapes and scratches along the way.

How do these skills play out in the field? Above and beyond resorting to a range of pro-active strategies and benchmarks for analyzing the context and applying guidelines, educators/HECPs can implement certain everyday practices. They observe, facilitate, and, if necessary, set parameters for children's adventure play. Except in certain necessary cases, the educators/HECPs don't assist or take charge of the children's actions.

Everyday skills for shared risk-management



By adapting to the magnitude of the challenge and the risks involved, the educators/HECPs position themselves in proximity to the children. Most of the time, the educators/HECPs can remain in the background and observe without interfering in the challenges the children are attempting to tackle. Nevertheless, in some circumstances, the children may require more targeted support. These cases may involve:

- Observing what the children’s intentions are. How are they going about it? “Jérémié, do you want to climb onto that rock? How are you going to do that?”
- Paying attention, at all times, to emotional indicators, and trying to understand how the children feel. Observing the boy’s face and gestures, Julie, his HECP, notices that he hesitates. Julie decides to wait and observe Jérémié. How does he feel? Is he still in the enticing ambiguity zone? If Julie feels that the child has gone beyond the zone and that the challenge is too big, she will first walk up to the child to prevent him from slipping or falling. Then she will ask the child to assess his own situation: “How do you feel, Jérémié? What is your body telling you? If your heart is beating really fast, your hands are sweaty, or your legs are shaking, you can decide that you have gone far enough and come back down.”
- Talk to the child, if necessary, either by describing his actions and tentative efforts or by asking him about those actions and efforts.
- Redirect any requests for direct help. When Jérémié asks the HECP, “Help me, Julie,” Julie replies: “It’s difficult. That is a huge rock. Look, I can’t do it for you, but I am right beside you.”
- Ask the child to examine and analyze the situation and make choices: “How far do you want to go? How are you going to do it? How do you plan to get back down or turn back?”
- Help the child to briefly take stock of his adventure.



Suggestions for supporting the educators’/HECPs’ adoption of the shared risk-management approach:

- Raise their awareness about the benefits associated with risky adventure play Encourage them to reflect on and express their beliefs and perceptions
- Empower them to embrace the balanced approach to risk and safety and shared risk-management approaches: support their development of ease and ability to instantly conduct a risk-benefit analysis
- Involve them in the ECS’s choice of orientations and benchmarks
- Ask them to collect examples of adventure play situations so these can be the subject of a reflective analysis

2.2.3 Parents

When asked about the obstacles and barriers that limit their potential involvement in a nature-based education project, many ECSs point out the parents’ apprehension in connection with risky play.¹⁹² Studies and experiments carried out in Québec and elsewhere in the world^{193_194_195} have shown that parents have increasingly favourable views of outdoor play. However, with regard to safety issues, their opinions are often more mixed. They want their children to play outdoors, and they recognize the benefits of outdoor play to help guard against sedentary lifestyles. Nevertheless, they want these advantages to materialize without the risk of injury.

Parents who are aware, well-informed, and listened to are invaluable allies

Undoubtedly, parents are crucial allies for implementing nature-based education in ECSs, especially with regard to safety issues. Various strategies may be considered to support this partnership (please refer to the chapter on partnering with the parents on p. 117). For example, a photo or video showing children analyzing a situation before acting on it may well prompt a discussion about shared safety-management.



When parents are included in the ECS's reflections and orientations, they become excellent ambassadors for play involving acceptable risks. In turn, they can field the concerns or questions other parents may have and thereby initiate an informed and reassuring dialogue on the subject.

Actions that encourage parents' acceptance of the principles of a balanced approach to risk and safety

- Discuss with them: safety, acceptable risk-taking, and its benefits for children
- Welcome their concerns and questions
- At the beginning of the school year, distribute information about the benefits, educational practices, and benchmarks set by the ECS
- Appoint and identify parent-mentors
- Share daily examples of children dealing with risky situations

2.2.4 The organization

ECSs play a central role when introducing a balanced approach to risk and safety protocol as part of nature-based education. Above and beyond the importance of organizing awareness-raising activities as well as training for staff or HECPs, it is up to each ECS to set benchmarks and orientations that comply with its legal obligations to ensure that the environments and practices are safe for children and staff. Furthermore, benchmarks will serve to reassure and guide educators/HECPs as well as parents.

When an ECS decides to undertake a nature-based education project, several questions of a legal nature may come up.

Here are some benchmarks for consideration:

- **Parental consent to the nature-based education project**

Parents who sign their children up with a childcare facility that has implemented a nature-based education approach must be informed of the details associated with its implementation so they can consent to it.

- *Giving consent by way of the service agreement*

When nature-based education is an integral part of the values and orientations of an ECS, it is important to add a statement to that effect in an appendix in the childcare service agreement. That way, you ensure that parents are well informed and made aware when they sign the service agreement. If some parents are uncomfortable with the nature-based education approach, they can decide to opt for a different childcare facility.

- *Consent midway through the year*

In case a nature-based education project is launched in the middle of the school year, it will be necessary to introduce the project to the parents of children implicated so that they can give their written consent. Some parents may voice their concerns or be reluctant to agree to the new project. Any outright refusals on the part of parents to rubberstamp a project beginning during the school year would be legitimate.

• **Procedures**

ECSs need to ensure they elaborate clear procedures in connection with nature-based education and the associated activities in nature. The procedures serve to highlight the ECS's diligence and commitment to comply with the various legal and regulatory frameworks, in particular the *Educational Childcare Act and the Educational Childcare Regulation*. Well-established procedures also help safeguard the health and safety of children and the ECS's staff members and thereby minimize the risk of injuries.

It is recommended that the detailed procedures connected to nature-based education be integrated into the internal governance structures. That way, the approach is anchored at the very heart of the organization. For example, the procedure, included in the internal governance structure, should include:

- The educator-to-children ratio that needs to be respected during activities in the natural environment. This ensures constant oversight of the children, as stipulated in the *Educational Childcare Regulation*
- The requirement to take along a cell phone during these activities so that any injured children can quickly receive necessary care and medical assistance, and so that parents can be promptly contacted.

• **The site owners' civil liability**

ECSs must consider the various specifics of the sites they visit with children. Is it a public site? Is it private property? If required, have the site's owners given permission to use their property? If yes, what have they allowed you to do and not to do on the site?

It must be pointed out that site owners cannot avoid liability for the potential bodily harm a child or educator/HECP may incur on their property. Even if the parents of the children using the site sign off on a clause specifying that they have no intention of suing the site owners in the event of an accident, the owners are not relieved of their liability in the event of an accident. As such, it is crucial that site owners are informed of the project and the ways in which groups of children plan to use the site, and that the owners confirm they have third party liability insurance that protects them in the event of any incidents.

2.3 Identifying, assessing, and managing risks and the benefits

2.3.1 Identifying situations that may involve risks

The environment and activities in nature-based education contexts can certainly involve risks. However, the idea isn't to stoke fear or discourage adventurous play or activities in the natural environment, but rather to raise awareness of issues and encourage educators/HECPs, as well as the children, to sharpen their senses so they can **quickly identify different situations that call for heightened vigilance or mitigation, redirection, or prevention measures.**

Bear in mind that **when educators/HECPs are trained and authorized** to implement the shared risk-management approach, the frequency and severity of incidents may decline.

According to Kleppe, Melhuish & Sandseter,¹⁹⁶ it is possible to distinguish between eight categories of risky play, all of which are at the heart of the definition of risk-taking. They are:

- **Play with high speed** (*risk of falls and collisions*)
 - Running fast, sliding down a snow-covered slope, sliding along an icesheet, running or rolling down a knoll, etc.
- **Play with great heights** (*risk of falls*)
 - Climbing up a tree, rock, wall, or steep slope, etc.
 - Approaching a ditch, crevasse, cliff, etc.
 - Walking on a tree trunk lying flat on the ground, a low wall, etc.





- **Rough-and-tumble play** (*risk of injury and emotional risks*)
 - Play fighting (body-to-body)
 - Acting out battles using branches, snowballs, etc.
- **Play with a chance of being lost**
 - Playing in areas without physical boundaries
 - Playing in wide open spaces
 - Hiding or playing in areas, where the child is no longer visible
- **Play near dangerous elements** (*risk of falling into or from something*)
 - Play near a fire pit
 - Play near a body of water
 - Play near bodies of water/waterways (pond, marsh, lake, creek, river)
- **Play with dangerous tools** (*risk of injury*)
 - Using hooks, ropes, peelers, knives, saws, mallets, etc.



- **Play with impact** (*risk of collision, injury, etc.*)
 - Deliberately crashing into obstacles
 - Beating a tree trunk or an iced-over surface with a stick
- **Vicarious play** (*experiencing thrill by watching others*)
 - Observing one or more children, adolescents, or adults engage in risky activities

As indicated in the key research findings on p. 20, studies have shown that nature-based ECSs offer a healthy and safe environment. That is particularly the case when these ECSs **establish clear and shared guidelines and benchmarks** that are based on the principles of risk/benefit assessment.

2.3.2 Proceeding to risk-benefit assessments

Probability and severity in risk analysis

Risk-benefit (R-B) assessment means carrying out an analysis based on the Risk-Benefit reference framework. The assessment can be conducted by tabulating the probability of adverse consequences occurring as well as the severity of these consequences (please refer to Figure 11). This analysis lets you position the natural environment or play situation in different colour zones, which helps guide what decision or action should be taken.

Fig. 11 Probability of occurrence and incident severity in nature-based education contexts

Probability VS Severity	Severe	Moderate	Mild
Highly probable			
Probable			
Improbable			

Red = immediate, firm action/decision
Orange or **yellow** = mitigation or adaptation
Green = no action

Initial and periodic risk-benefit (R-B) assessments of the natural sites and activities^{tt}

The ECS's staff—if possible, together with at least some parents—should carry out an initial assessment of the risks and benefits associated with the planned site where outdoor learning and play sessions will be held. The following aspects may be considered in the assessment:

- The natural site's **name** and location
- The **site's** main **characteristics** and a simple **map**
- **Hazards present in the environment/Risky situations**, according to the play categories described above (high speed, great heights, rough-and-tumble play, exploring alone, dangerous elements, dangerous tools, play with impact, vicarious play)
- **Risk-benefit assessment**
 - Types of incidents that may occur and the consequences for the children
 - The probability of incidents occurring and how severe these may be (F)
 - The potential benefits associated with these situations
- **Decisions**
 - Zones to be excluded
 - Mitigation measures to be implemented
 - Zones that may be accessed
- **Follow-up and timeline**
- **Person in charge** of follow-up

This **risk-benefit assessment exercise of the natural site should be repeated periodically**, for example at every change of season.



Please refer to the risk-benefit analysis examples listed in Part 3, on pages [258](#), [260](#), and [262](#)

^{tt} The two next sections are based on the Risk Benefit Assessment Toolkit developed in 2019 by [Child and Nature Alliance of Canada](#).

R-B assessment and the situation dynamic

In addition to initial and periodic assessments, adults assigned to guide children in the natural environment should remain vigilant and adopt a reflective and dynamic approach when assessing the risks and benefits associated with the kinds of situations occurring outdoors, daily.

This reflective process has the advantage of allowing the risks and benefits associated with specific situations to be managed in a more focused and adaptive manner. Furthermore, it encourages, in both the children and adults, the development of analytical, decision-making, and problem-solving skills, as well as promoting within the children a sense of self-confidence and awareness of, and respect for, their own abilities.

Consider including the following in this shared assessment:

- Recess or other breaks/time for gathering the children together, if applicable
- Identification of a given challenge a child wants to tackle and acknowledgement of the interest triggered by the project
- Pinpointing hazards in the environment that a child may come into contact with. Considering the contextual elements, for example rocks that are potentially wet and slippery after it rains
- Exploration/assessment of the risks and benefits of the planned action
 - Type of incident that may occur
 - Probability of this incident occurring, as well as its severity: is it in the green, yellow, orange, or red zone?
 - The potential benefits of the action/activity for the children and adults?
- Exploration of the children's and adults' actual and potential feelings
 - How do I feel in this situation?
 - How would I feel if: I overcome the challenge? An incident occurred? I abandoned the project?
- The decisions to make with the children and any other persons present:
 - a) no intervention – go ahead, b) mitigation, c) redirection and d) prohibition – no go

« Following torrential rains, the creek burst its banks. Together with the children, we agreed to observe the phenomenon from afar, and then seek out another area in the forest. The children decided to substitute this activity for another, which could be more readily adapted to the conditions of the moment »^{uu}

- Follow-up and timeline, if relevant



To enhance your understanding, please complete the exercise on p. [208](#)

^{uu} An educator with first-hand experience of nature-based education as part of the Alex project

2.4 Contingency plan

Despite all the precautions put in place by the ECS, an incident may still occur. As such, it is recommended to have contingency measures on hand to guard against this eventuality because, as we all know, there is no such thing as zero risk. The educators/HECPs should be equipped to intervene appropriately in a given situation and minimize potential consequences. The contingency plan should specify the sequence of actions to implement in the event of a severe incident, as well as the individuals in charge.



Please refer to the sample contingency measure in Part 3 on p. [263](#)



3. Occupational health and safety: looking after the adults during sessions in the natural environment

With respect to all work activities, the *Act respecting occupational health and safety* (AROHS) stipulates that any hazards present in a work environment must be eliminated at the source. Whether the workspace is located indoors, outdoors, near or far away from the childcare facility, it must provide the same level of safety for the workers. Since nature-based education takes place in natural environments that leaves room for ample variability, it is difficult to eliminate all potential sources of hazard.

In order to be able to offer stimulating activities that involve challenges for the children, while respecting the legal obligations in connection with the workers' health and safety, it is recommended that an open attitude be adopted, one that allows for a different approach to prevention.

Occupational health and safety (OHS) is a shared responsibility:

- **Employers** have a responsibility to offer a safe workplace. They do this by implementing all necessary measures to eliminate hazards, or, when they cannot be eliminated, to control them (AROHS Sect. 51). They must exercise foresight, authority, and efficacy.
- **Workers** must take all necessary measures to protect their health and safety, and their physical and psychological integrity, as well as that of others, in particular with respect to the measures implemented by their employer, but also by participating in the identification and elimination of any risks of accidents in their workplace (AROHS Sect. 49).

Therefore, in an outdoor environment that cannot be fully controlled due to conditions that may be uncertain or changeable, it is important to be prepared and to have a plan of action. Consequently, once the site where the nature-based activities are to take place has been decided, it is recommended to first undertake a fact-finding mission there, based on completing a self-assessment form, assessing the environment and identifying any risks.



Please refer to the sample checklist concerning OHS in natural environments in Part 3 on p. [263](#)

This risk assessment should be carried out from two perspectives: the **probability** of a consequence occurring (highly probable, probable, improbable) and the **severity** of the potentially resulting injuries (very severe, severe, superficial). This approach lets you identify the existing or potential risks in a given environment and determine their magnitude (low, moderate, high), allowing you to prioritize the actions and make decisions that ensure everyone's safety. These preventive measures help mitigate the probability of adverse consequences occurring.

Given that nature changes depending on the weather conditions and seasons, there is good reason to reassess the natural environment and note the changes as well as new situations liable to produce adverse consequences.

As OHS is a shared responsibility, it is recommended that you implicate members of the health and safety committee or staff members when deciding and implementing preventive measures. Implicating staff encourages a better understanding and more consistent observation of the different safety measures. Moreover, to ensure consistency between the vision of the OHS and educational staff, it is best to involve those workers who have educational expertise and are very familiar with the groups of children. Their participation in the OHS risk assessment in the natural environment coupled with their understanding of the benefits of risk-taking for children is crucial for meeting OHS expectations, as well as those associated with nature-based education.



Finally, all workers involved in implementing the nature-based education approach should be informed about and receive training in the applicable OHS policies, procedures, and rules during activities in the natural environment. Among other things, this will provide them with the necessary skills and knowledge to recognize, analyze, and control the risks they encounter, employ preventive measures adapted to the situation, and propose alternative solutions while executing their work tasks.

Summary:

- Implicate the workers; OHS is a shared responsibility
- Keep an open mind to allow for the emergence of new ideas and new ways of doing things
- Observe/analyze and plan: assess the environment; gather information; draft work policies, rules, and procedures; procure equipment adapted to the environment, etc.

Train the workers in the OHS specifics applicable to natural environments

In keeping with the philosophy of nature-based education, the educators/HECPs are expected to look after their health and safety, while enabling children to develop through exploring and tackling challenges, and discovering and testing their limits.

4. Structuring measures to support the implementation of a balanced approach to risk and safety

A balanced approach to risk and safety in nature-based education requires the implementation of structured parameters surrounding educational childcare practices and the adults' work practices.

- Policies for activities in nature and contingency plans and measures
- Benchmarks for different types of activities or situations: climbing a tree, bodies of water, ticks, poisonous plants, tools, etc.
- Templates for initial and periodic risk-benefit assessments of the play environments
Templates for dynamic risk-benefit assessments
- Documents for ratification by the Board
- Informed consent forms to be signed by the parents
- Staff/HECP training and support strategies
- Inventory of possible OHS risks
- Self-assessment forms: Risks in the natural environment
- Health and safety planning forms, pre-departure checklist



Please refer to Part 3 on p. [246](#) for examples of some of these structuring measures



Seventh principle: A balanced approach to risk and safety

Key characteristics

- **Recognition that risks are a powerful tool for whole-child development**
 - Focus on acceptable risk-taking
- **Adopt a shared language around safety concepts**
 - Hazard, risk-taking, acceptable risk, well-balanced safety, etc.
- **Shared management of safety issues**
 - Children, parents, educators/HECPs, and ECSs—everyone has a role to play
 - Facilitate the children’s risk assessment and risk management
 - Information, training, facilitation and support, policies, orientations
- **Identify situations that may involve risks**
 - Quickly identify situations requiring increased vigilance, or mitigation, redirection, or even prohibition measures
- **Carry out risk-benefit assessments**
 - Initial and periodic (every season) R-B assessments of the natural play environments
 - On-site (daily) R-B assessments of the situations, together with the children, to make informed decisions
- **Adopt structuring measures**
 - Policies concerning activities in the natural environment
 - Parental consent
 - Contingency plans and measures in the event of a severe incident, etc.
- **Ensure occupational health and safety**
 - Shared responsibility between employer and employees: training and preparation
 - Risk-benefit observations and analysis from an OHS perspective
 - Planning and preparing the activities

How are each of these characteristics reflected in your own practice? Please situate your ECS regarding this fourth principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

Eighth principle: Fostering nature connectedness

Encouraging a rewarding relationship with nature



Soft snow had fallen throughout the night, covering the ground with stardust. At daybreak, the undergrowth sparkles. The toddlers and their educator slowly enter the woods, wonderstruck. The snow cracks underfoot, announcing their passage to the small, nosy titmice that approach.

Pascal draws the children's attention to the flaky snow that has accumulated on the trees' branches. Jeanne and Jaydn lie down flat on their backs so they can get a better view of the sky. Arthur approaches them and energetically shakes the tree above them, triggering a brief blizzard. Everyone laughs and joins the fray. In no time at all, the trees stand unclothed, having ceded their white coats to the children.

This situation aptly illustrates the moments of wonder available in nature-based education. Such small daily experiences, provided as part of the constantly refreshed and renewed offerings of nature, gradually pave the way to young children's nature connectedness.

1. Why foster nature connectedness in young children?

Ever since the arrival of the industrial world, human beings have shown a tendency to perceive themselves as outside or even above the natural world: It is there to serve and be used by humanity. This has resulted in an ecological imbalance and a significant reduction of contact with nature, particularly among children. In 2008, Richard Louv sounded the alarm by associating a range of physical and mental health problems with a nature deficit.¹⁹⁸ Closer to home, François Cardinal¹⁹⁹ *also painted a bleak picture of nature disappearing from children's lives. Taking inspiration from Indigenous philosophies, a worldwide movement is taking shape that focuses on the important relationship between children and the natural world.*

1.1 1.1 The benefits of a close relationship with nature

Children derive many benefits from developing nature connectedness. It can make them more relaxed, calm, and resilient. They learn to listen, observe, and find their place in the universe. They may also become curious and seek to understand the causes of the phenomena they observe and to creatively resolve problems. They may learn to appreciate their surroundings and sense the wonders inherent in the beauty of a tiny salamander or a giant white pine.²⁰⁰ The bond they forge with nature will last a lifetime. It offers a natural antidote to stress and loneliness.



During their explorations, young children can get to know the territory they inhabit, its biodiversity, and the role played by each species. They realize that living beings depend on one another. They may discover how their actions impact nature and develop a profound respect for the natural world--for which they may feel increasingly responsible. Finally, they may gradually develop lifestyle habits that are good for themselves as well as for the natural environment.

There are also benefits for the adults who guide young children in their nature connectedness journey. In fact, many educators/HECPs report changes in their lifestyle habits and in their own relationship with the natural world. The same benefits have been reported by parents whose children participate in regular immersion sessions in the natural environment.

1.2 ECSs have a role to play in the global ecological crisis

Local and global ecological issues compel all human beings and organizations to act: climate change, dramatic biodiversity loss, contamination, changing or disappearing habitats, etc. Given the scale of the problem, some ECSs are trying to build awareness, a sense of responsibility, and a determination to act within young children so they may feel compelled to help “save the planet.” Nevertheless, such a stance isn’t recommended for young children, who may be overwhelmed by the complexity of the issues raised. Moreover, it serves to perpetuate the idea that human beings are separate from nature.



Prematurely shouldering young children with responsibility for the global ecological crisis risks triggering a sense of anxiety, anger, and even powerlessness. **Nature-based education is more focused on fostering environmental awareness through the development of a profound attachment to the natural world.** This initial love can give rise to a desire to know and understand the connections that link humans and other living beings. As children get older, they may want to act, mobilize, and engage in an eco-responsible way of life.

« The important thing is that the children are given the possibility to get closer to the natural world and learn to love and feel good in it, before they are asked to help heal its wounds. »
David Sobel

The situation is different for adults and organizations. More specifically, the **ECSs are encouraged to analyze all their practices from the perspective of eco-responsibility.** Through their organizational and management choices, which also draw in families, ECSs can play a role in restoring the bond between human beings and ecosystems and thereby address current ecological issues. In doing so, every ECS, every educator/HECP, and every parent can become a model and an inspiration for the children who discover the richness and scale of the surrounding world everyday.

1.3 Human development is connected to the natural environment

The bio-ecological model of human development, as proposed by Bronfenbrenner,²⁰¹ recognizes the decisive influence of the different human systems in which children evolve: their family, peers, educational environment, neighbourhood, the standards and values in their community, etc.



Surprisingly, this ecological model pays scant attention to the role of the natural or non-human environment in children’s development. Be that as it may, the relationships children construct with nature from when they are born are crucial. Nature-based education encourages ECSs to enhance the foundational ecological model presented in the *Accueillir la petite enfance* education program with the relationships that the children construct with the natural ecosystem.

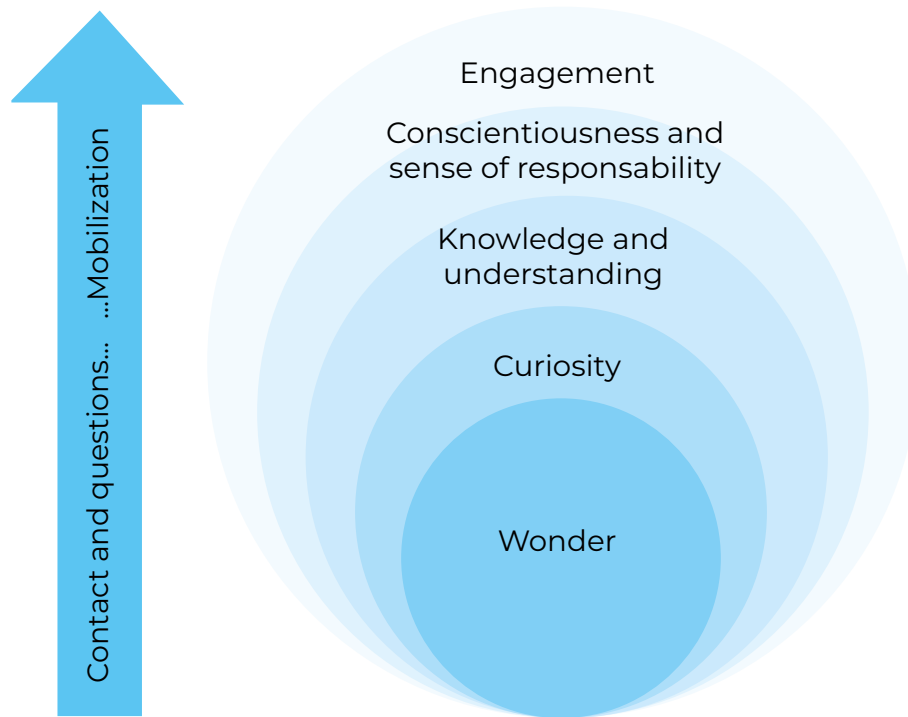
2. How does one foster nature connectedness?

Inspired by the vision advanced by David Sobel, nature-based education relies on the sustainable education models developed at *Shelburne Farms*²⁰² as well as on *French-language adaptations undertaken by Boisvert*.²⁰³ The ECSs’ role is to support young children’s burgeoning nature connectedness in a gentle and progressive manner.

As illustrated in Figure 12 below, the educational actions and interactions between educators/ HECs and children are first and foremost meant to **stimulate their sense of wonder towards the surrounding world, and then to sustain their curiosity and hunger for knowledge and understanding**. In the preschool years, environmental awareness, a sense of environmental responsibility and engagement may be present in rudimentary form only; at that stage, these areas are for the adults and organizations to uphold.

Fig. 12 Awakening nature connectedness: from wonder to engagement

Adapted from Hoyler & Wellings (2013) and Boisvert (2017)



2.1 Encourage a sense of wonder

From birth, babies are sensitive to their non-human environment. They exhibit discomfort when they hear shrill sounds or are blinded by bright lights. Conversely, they relax when they hear a blackbird's song or when a gentle breeze brushes against their faces. Little by little, infants gather all these sensations and construct a representation of the world surrounding them. Likewise, they forge bonds with the individuals looking after them and can develop an emotional relationship with their natural environment. When these encounters are frequent, allowing time and space to inspire a sense of well-being and wonder, the foundation of these relationships may be solidified.

Limitless possibilities exist for cultivating young children's sense of wonder towards the non-human world. One needn't go far to find a suitable environment. The preferred eco-friendly strategy in Denmark may be summarized as "one's home district to be contemplated"²⁰⁴. The educators in that country prefer supporting the discovery of natural elements and spaces located nearby. That way, children learn to discover and appreciate the landscape surrounding them before exploring wider spaces that may require time, energy, and/or money to reach.

This is also the essence of the place-based approach briefly introduced on p. 78. It involves being on the lookout and being open to daily opportunities that materialize nearby. Seizing these opportunities makes it possible to expand one's vision of the natural world—beyond the often reductive perception that the world consists of nothing more than plants and animals.



We call to mind some examples of elements that make up the natural environment and which may serve to stimulate a sense of wonder in young children:

- **The non-living world:**

- Light, celestial bodies, air, sounds, wind, sky, clouds, rain, sleet, snow, ice, water, fire, soil, sand, minerals, etc.
- Products of living beings: shells, fruits, wood, leaves, nests, seeds, etc.
- Objects or materials made from natural materials

- **The living world:**

- Animals: amphibians, mammals, birds, insects, fishes, invertebrates, etc.
- Plants: herbs, algae, shrubs, trees, flowers, etc.
- Mushrooms, lichens, etc.

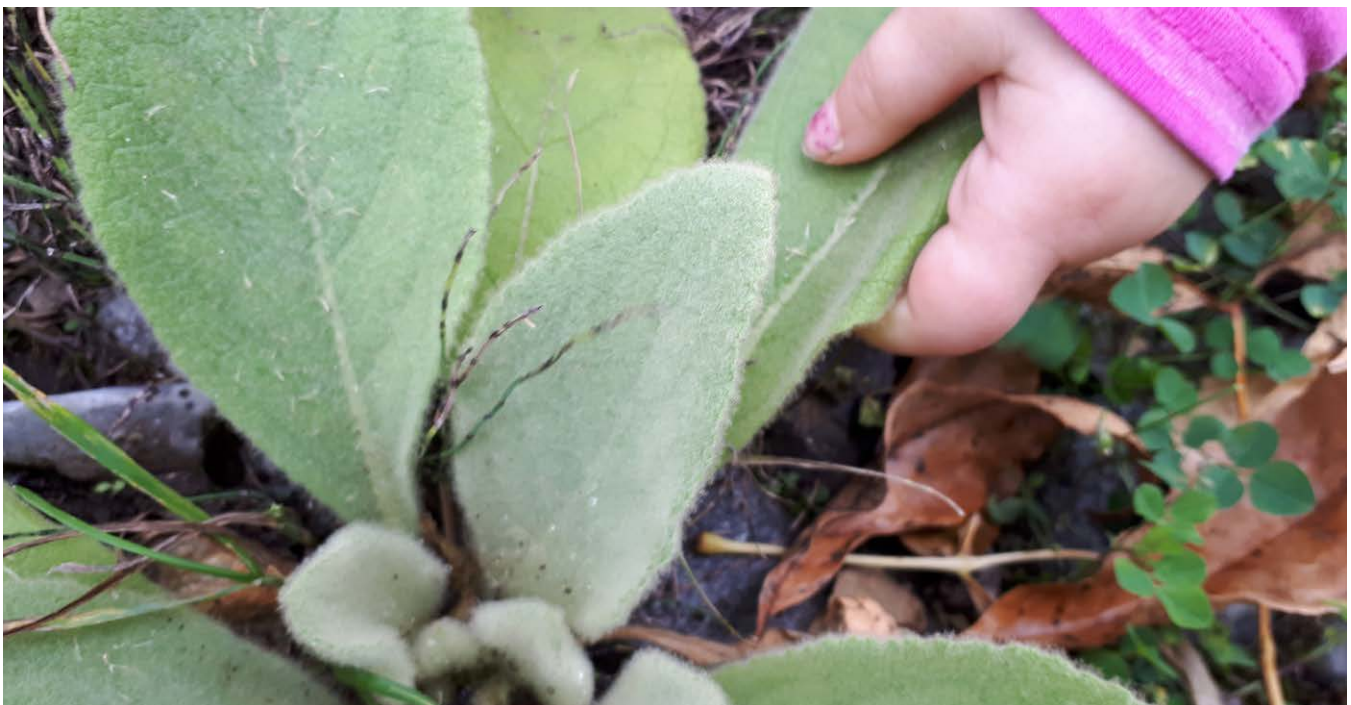


Table of suggestions for stimulating a sense of wonder

Below are suggested actions for stimulating a sense of wonder in young children, beginning with those in the earliest months of life. Keep in mind that infants and toddlers are particularly open to sensing wonder.

Actions	Elements	Examples
Point out the natural elements—everywhere and at all times	Interplay of shadow and light	<ul style="list-style-type: none"> • Prisms, mirrors, filters, magnifying glasses, etc. • Observation and shadow-based ephemeral art
	Songs and sounds of the natural world	<ul style="list-style-type: none"> • Stop and take the time to listen to and feel the rain, wind, frogs, coyote calls, hummingbird buzzing sounds, etc. • Listen for them during nap time • Try imitating the sounds
	Colours and hues	<ul style="list-style-type: none"> • Match the colours in nature with colour charts or coloured pencils • Make a mosaic of colours from different collected leaves (land art) • Explore the world of natural dyes
	Odours	Damp soil, balsam firs following rain, dead leaves, etc.
	Textures	Coarseness of bark; prickliness of burdock burrs; tenderness of mosses; smoothness of pebbles; fluidity of water or elusiveness of wind, neither of which can be grasped by small hands; etc.
	Flavours	Vegetables from the vegetable garden, berries growing along the fence, herbs grown indoors, etc.
	Shapes	Trees looking like fairy houses, rocks with a pointed nose, comparing the different sizes of branches, etc.
Motions	Trees bending in the wind, animals, water and its flow patterns following rain, falling rocks, etc.	
Maximize contact situations	With natural elements	In indoor environments, hallways, outdoor play spaces, around the ECS, in the neighbourhood, back alleys, vacant land, fields, the forest, the riverbank, in naturalized indoor environments and outdoor play spaces, etc. (please refer to the chapter on environments rich in biodiversity, loose parts, and open-ended materials on p. 60)

Actions	Elements	Examples
Encourage direct contact	Touch, handle, feel. With infants: choose safe materials and places; remain vigilant	<ul style="list-style-type: none"> • We spread a blanket on the ground in the outdoor play space, a park, or forest. It will be the infants’ “base camp” from which they can explore the world around • Prioritize species that are representative of the local ecosystem and that the children can recognize, touch, photograph, etc.
Prioritize sensory experiences (the five senses)	Describe sensory experiences	“Listen to the buzzing bumblebee. It’s as if it has a small engine”
	Play with reduced sensory input	Blindfold your eyes to hear better, plug your ears to better smell the odours following rain, peer through a tube to focus your gaze, etc.
Take pictures of...	Sources of wonder and post them on the walls	<ul style="list-style-type: none"> • When a specific element or place arouses interest, take a picture of it so it can be revisited later; accept the children’s choices • Let the children use the camera
Adopt...	A place, tree, rock, etc.	<ul style="list-style-type: none"> • When they are old enough, ask every child to choose a small area in the forest where they can go to relax, calm down, or refuel on the place’s energy • Ask each child or group of children to choose a tree as their friend in the forest, with the intention of observing and getting to know it better
Report...	On a few items found in nature	Exhibit them on the table of curiosities inside the childcare facility or in the reception area
Assume a wonderstruck stance...	When witnessing the beauty and complexity of the natural world	<ul style="list-style-type: none"> • Call out or whisper, express your surprise or admiration • Slow down and draw out the moment • Savour the shared joy and sense of well-being • Encourage the children to become aware of the emotions they feel

2.2 Sustaining children’s curiosity

Being curious is being interested in—or fascinated or captivated by—an object or phenomenon. Curiosity is a lead-in to knowledge. It is an eagerness to learn.

Curiosity benefits from being nurtured or cultivated so it can become and fulfill its mission: **an engine for the development of thinking skills**. Anyone who has been around children aged 3 to 6 will have witnessed this. Children ask questions, not so much to get answers, but often to engage in a set of reflections with a person they like, a significant adult. Answering their first question will likely lead to another. By doing this, they develop their ability to reason, analyze, compare, predict, deduce, infer, etc.



The golden rule for sustaining curiosity?
REFRAIN FROM GIVING THE ANSWER!

How does one not give an answer to the questions children ask? Here are some alternatives:

- **Get the children to refine their observations**

- Ask the children to pay attention to specific details: “Look carefully; what can you see at the foot of that tree?”; “Did you notice what happens when you throw a stone into the water?”
- Encourage them to compare, measure, and organize their observations: “Are its wings the same size as its feet? How can you find out?”



- **Ask the children questions**

- Whenever something arouses their or the adult's curiosity
- Prioritize open-ended questions: "Why does the creek not freeze over in winter?" "How do bats manage to squeeze through such a narrow opening?"

- **Ask sub-questions**

- When the children ask a question, one can bounce it back to them, or else ask questions to help them clarify their thoughts or establish connections with what they already know or have already seen. For example, when Henri asks: "Why is the young boreal owl always asleep when we come to see it?", his educator has more than one sub-question ready:
 - "What do you think?"
 - "Why do you think it is sleeping? What do you think it does when you aren't here?"
 - "Does it remind you of anything or anyone?"

- **Patiently listen to the children's answers**

- Children need time to think and organize their answers
 - Take a genuine interest in the children's answers. Look for signs of their way of thinking or reasoning
 - Don't wait for the right answer. Avoid praising children who get the right answer. Encourage the thinking process rather than the result!

- **Stimulate collective inquiries**

- Ask other children to join the reflection initiated by or for one child
 - *Why don't we ask Louis and Mariana what they think!*
 - *"I believe Théo may have a suggestion for how to answer that question."*
- Share your own questions and inquiries as a fellow explorer: "I am wondering why we don't see any bear tracks here"

- **Create situations of cognitive disequilibrium**

- By proposing odd or ridiculous answers, educators/HECPs incite the children to react or offer their own answers. For example, you could answer the question "Where do frogs go in winter?" like this: "To an indoor swimming pool!" This will certainly bring a smile to the children's faces as they rush to contradict this assertion and explain why it is impossible.

- **Support the inquiry / problem-solving process**

- Observe the world around us and examine it
- Choose a specific question or problem
- Ask the children to suggest solutions or suppositions (hypotheses). From the age of 3-4, young children have a grasp of the concepts of supposition and solution. The more you encourage them to come up with suppositions, the more likely they are to do so by themselves
- Analyze or test your own suppositions or suggested solutions: join in on the experimentation and brainstorming! Assess the findings or draw conclusions



As long as the inquiry / problem-solving process is ongoing and the children continue to seek answers, consider delaying sharing the answer.

The period during which children's curiosity and inquiries are fostered enables them to develop their thinking skills. It is impossible to exaggerate how valuable this is. The time lag between the question being asked and its conclusion can vary from a few minutes to several days. It depends on the children's age, skills, and patience, or on their ability to find satisfactory answers on their own.

Educators/HECPs have further tools at their disposal:

- Chats/discussions: questions and sharing information
- Notebooks for logging sketches, observations, questions, and suppositions: keep a record of steps and reflections
- Free distribution of photos/videos documenting the inquiries, or problems encountered
- Concept maps: together with the children, create a diagram of the questions or subjects addressed by connecting them to each other

Death as a source of learning and development

How can you distinguish between the living and the non-living? If a rock is non-living, does that mean it is dead? Is a tree that has been struck by lightning dead or alive? And what should we think of flowers, fruits, and seeds? Children are fascinated by these complex questions.

That morning, the children notice something strange lying on the snow. “Look, Johanne, it seems to be a dead animal.” The educator glances over and realizes it is a motionless crow lying at the foot of a tree, its head stuck in the snow. As they all draw nearer, they wonder: “What happened? Is it in pain? Or is it cold? Are there any signs of injury? Where did the bird come from? Will it come back to life when it is no longer cold? »

Every question, whether asked by the adult or the children, is an opportunity to reflect and share ideas or impressions. Encountering a dead animal or grave is a golden opportunity. It is a chance to address profound questions. The concept of death and rituals surrounding it vary considerably from one family or one culture to the next. Rather than offer explanations in connection with their own cultural interpretation, the educators/HECPs can seize the opportunity to gather all the children’s questions and suggestions so they can share them with their parents.



2.3 Foster the hunger for knowledge and understanding

Even though the encouragement of young children's sense of wonder and curiosity is important, it is also advisable to gradually foster their desire for knowledge and understanding about the world. Offering them access to knowledge without dampening their curiosity is a subtle art well worth perfecting!



Many sources of information can be made available to children to allow them to consult and navigate their questions on their own. By proceeding in this manner, their curiosity is stimulated, while at the same time fostering their hunger for knowledge and understanding.

- **Reference and awareness-raising tools:** identification guides, laminated maps^{vv}, posters, documentaries, docufiction, etc.
- **Reference websites and apps:** *Oiseaux par couleur*, E-Birds
- **Resource persons:** biologists, birdwatchers, hunter-trackers, farmers, beekeepers, botanists, etc.
- **Social media networks** for sharing questions and discoveries
- Forestry associations, watershed organizations, birding associations, mycological associations, astronomy clubs, caving clubs, etc.
- Municipal, regional, and national **parks** (SEPAQ and Parks Canada)
- Environmental education **organizations**

^{vv} A collaboration between Clubs 4-H and AQCPE is currently underway to create laminated maps detailing Québec's biodiversity



ECSs may also consider specific projects:

- Vegetable gardens; with a choice of plants, task planning, seedlings, transplanting, tending, observations, harvesting, processing, tastings
- Insect hotels, chicken coops, incubators, rabbit hutches, etc.
- Participatory science projects (for example, the “Honeybee-citizens” project)
- Tracking signs of the presence of animals, etc.

2.4 Stimulate awareness and a sense of responsibility

As mentioned at the beginning of this chapter, stimulating awareness and a sense of responsibility in connection with ecological issues should **not be a priority** with young children. Nevertheless, it is possible to establish a few guidelines associated with nature connectedness and **eco-citizenship** through the actions listed below.

- Ask the children to adopt small eco-responsible actions:
 - Take leftovers to the compost bin
 - Take apart boxes for recycling
 - Tend the vegetable garden and indoor seedlings
 - Reduce bottled water consumption
 - Collect rainwater
 - Participate in a forest cleanup
- Reflect on situations encountered or observed, such as land erosion, excessive packaging, waste of resources, etc. Stay focused on concrete questions and issues that are close to the children’s realities

During sessions in the natural environment, the educators/HECPs should be guided by the principles of Leave No trace²⁰⁵ and the children may be introduced to the concept. It is based on parameters that allow for visiting and using natural spaces, while limiting/minimizing our human footprint.

For example, the principles of Leave No Trace recommend respecting wildlife and leaving everything as intact as it is found. There are also guidelines for minimizing the impact of fires and for proper waste management.

And finally, the principles also address the issue of **trampling and overusing** natural areas visited. Some ecosystems can be very fragile, making it necessary to question whether they should be visited by groups of children at all. This may concern areas where rare or sensitive species are present, or that serve as nesting sites during certain times of the year. When should one refrain from visiting such sites with children? Which specific areas should be protected at all times? How does one select a site for base camp, knowing that it will be impacted from being tread on? Engaging in dialogue with the site manager and ecologists can help make the right decision. Whenever possible, the children should participate in examining these questions as well.



2.5 As an organization, commit to eco-friendly actions

A sense of wonder, curiosity, knowledge, and understanding are central to fostering nature connectedness in young children--and adults. In the case of grown-ups, however, there are other challenges to overcome. Families and ECSs are encouraged to reflect on their own ecological footprint, mobilize, and embrace a range of eco-friendly actions based on sustainable development principles.

- Reuse - Recycle - Reduce – Reassess/Repair
- Eco-friendly waste management Responsible purchasing
- Non-manufactured educational materials sourced in the community: natural, reclaimed, recycled
- Sustainable diet
- Eco-friendly transportation



To enhance your understanding, please complete the exercise on p. [210](#)

3. Structuring measures to help foster nature connectedness

The adoption of measures to foster nature connectedness aims for two distinct target groups: children and the organization.

- In connection with fostering nature connectedness in the children:
 - Outline the vision and practices that have been decided upon in the **education program**
 - Use benchmarks to guide the **choice of educational materials**, including materials for display (posters, photographs, mobiles, objects, etc.)
 - **Have a professional development plan that** incorporates reading materials and training sessions on biodiversity, etc.
 - **Develop maps of the territory**, video clips, and books showcasing local and regional biodiversity
 - **Create agreements using resources** in the community concerning environmental education (EE)
- The following are a few examples on how to apply an eco-friendly approach to CPEs:
 - Conduct self-assessment and promote completion of the **CPE Durable certification**^{www}
 - Form an ecological **committee** (staff/parents/community)
 - **Revise food policies**
 - **Revise purchasing policies**
 - **Review and update waste management policy**



^{www} CPE durable coaching and certification program. <http://enjeu.qc.ca/programmes-de-certification/cpe-durable/>

Eighth principle: Fostering nature connectedness

Key characteristics

- **Encourage a sense of wonder:**
 - Highlight natural elements and maximize contact situations with nature
 - Focus on sensory experiences and emphasize the felt emotions
- **Support curiosity and the exploration of nature:**
 - Encourage refined observations
 - Ask the children questions and sub-questions
 - Refrain from giving an answer
 - Patiently listen to answers, support the inquiry / problem-solving process, etc.
- **Foster the hunger for knowledge and understanding:**
 - Offer access to knowledge without dampening curiosity
 - Make information sources available to the children
 - Consider collective project
- **Stimulate the children's awareness and sense of responsibility:**
 - Ask the children to adopt small everyday eco-friendly actions
 - Avoid interventions that make the children feel guilty
- **As an ECS, commit to eco-friendly actions:**
 - Waste management
 - Purchasing policies
 - Partaking in a sustainable diet, etc.

How are each of these characteristics reflected in your own practice? Please orient your ECS regarding this fifth principle of nature-based education by completing this [questionnaire](#). When you are done, a diagram illustrating your circumstances will be generated.

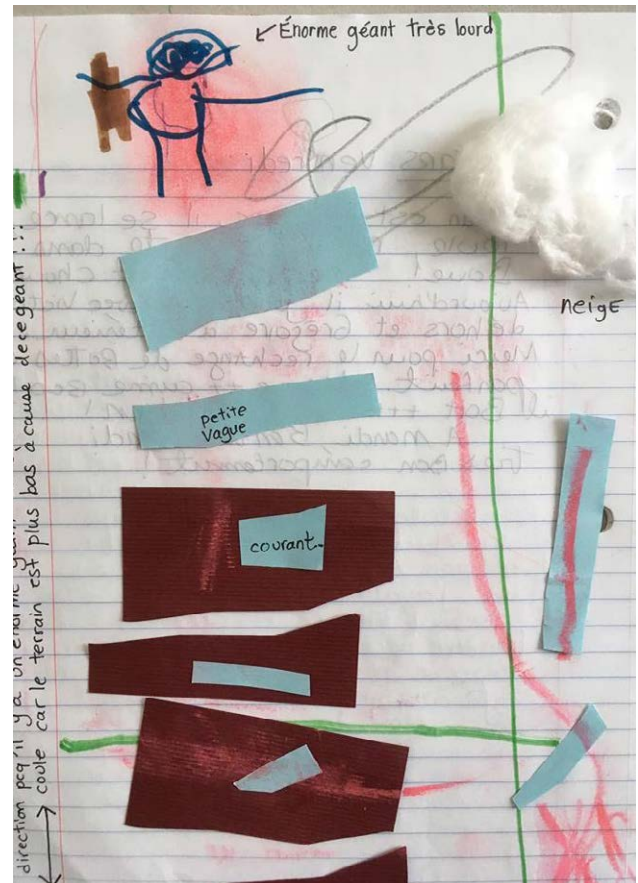
Pedagogical documentation

A multi-purpose tool in nature-based education

Kathy, a home-based childcare provider and educator implemented nature-based education several years ago. Her entire educational practice is suffused with it. Every day, she keeps track of the children's experiences gathered during the long hours spent in the forest or on the way there. These photos or videos are sorted and shared with the children and parents. Moreover, every day following nap time, she asks the children to enter their impressions of the activities in the forest in their logbook, which they keep throughout the year. They use it to represent their adventures with drawings or collages, and Kathy adds notes that the children dictate to her.

Rebekka, an educator working in a CPE, had her first experience of pedagogical documentation before discovering nature-based education. However, it wasn't until she began to spend time in an urban forest with her group of children that pedagogical documentation became an essential strategy in her professional practice. At first, she took a lot of photos and videos but felt overwhelmed by the quantities. Rebekka gradually learned to recognize the meaningful moments and focus on capturing

the essential aspects. She always has her thoughts and observations notebook with her, into which she notes down whatever grabs her attention or what the children say. Once every week, she takes the time to select the photographs that most aptly reflect the children's one or more powerful experiences in the forest that week. Based on her selections, she prepares posters for sharing with the parents and children.



Adopting the practice of pedagogical documentation entails identifying and recording the children’s meaningful experiences and then organizing and analyzing them to gain an understanding of what occurred and make a fresh start. Pedagogical documentation also involves choosing the best strategies for communicating, disseminating, and sharing these observations to initiate a dialogue with the children, parents, or colleagues. The educator’s/HECP’s perspective, understanding, and practice will be transformed in the process.

« To document is to relate the meaning of what we do, to render visible the children’s daily life so we can consider, share, discuss, assess, and improve our practices. » (Galardini, 2010)

The practice of pedagogical documentation originated in the early childhood education approaches in the Reggio and Tuscany regions in Italy. It has since been widely adopted across North America, including, more recently, in Québec. While the practice is useful across a wide swath of educational contexts, it is particularly relevant to nature-based education. It constitutes a multi-purpose tool that enhances the value of the eight (8) principles of nature-based education.

Oh... What's that?
 A pink flamingo?
 No, it's not pink.
 A swan!
 No, it's not white.
 A duck!
 It is much bigger!

By searching on their own, children learn to refine their observations and make assumptions. They realize that they can find answers and are proud to represent their discovery, here through drawing.

Julien lent us some bird identification guides. The children looked for themselves and finally found it: it's a **Great Blue Heron!**

Now let's try to draw it keeping in mind its main characteristics: long beak, big legs and long neck...

Spring is a source of wonder!

Each species of tree or shrub is unique, and the blossoming of its buds is fascinating.

The child observes, notes the small details, keeps track of them...

1. Why adopt pedagogical documentation?

Pedagogical documentation helps you enrich and transform the ECS's observation, planning, and communication practices. ECSs choose to adopt this practice because it:

- Makes the children's interests, actions, and thoughts visible
- Enriches and intensifies the dialogue between the educators/HECPs and the parents Puts the educators/HECPs in the position of active observer
- Helps the educators/HECPs fine-tune their perspective and gain a better understanding of every child and the group of children
- Makes it easier to write periodic profiles and enriches the children's educational record by focusing on the interests, feelings, and budding skills the educators/HECPs identify in the information collected
- Stimulates interactions with the children and their thoughts. Pedagogical documentation often makes it possible to breathe new life into the inquiries, explorations, and projects
- Supports the educators'/HECPs' reflections concerning their practice: their targeted educational goals, their educational actions, and their professional development
- Allows the educators/HECPs to engage in discussions based on concrete elements with their colleagues and pedagogical supervisors

2. How does one implement a pedagogical documentation practice?

Pedagogical documentation is an on-going process requiring gradual fine-tuning and a commitment lasting the entire year. It requires patience. It is a drawn-out skills development process.²⁰⁶

« It is this continuous observation that builds your understanding of the meaning of a child's behaviours rather than a hasty interpretation based on a few isolated actions that may be more visible or louder. » ²⁰⁷

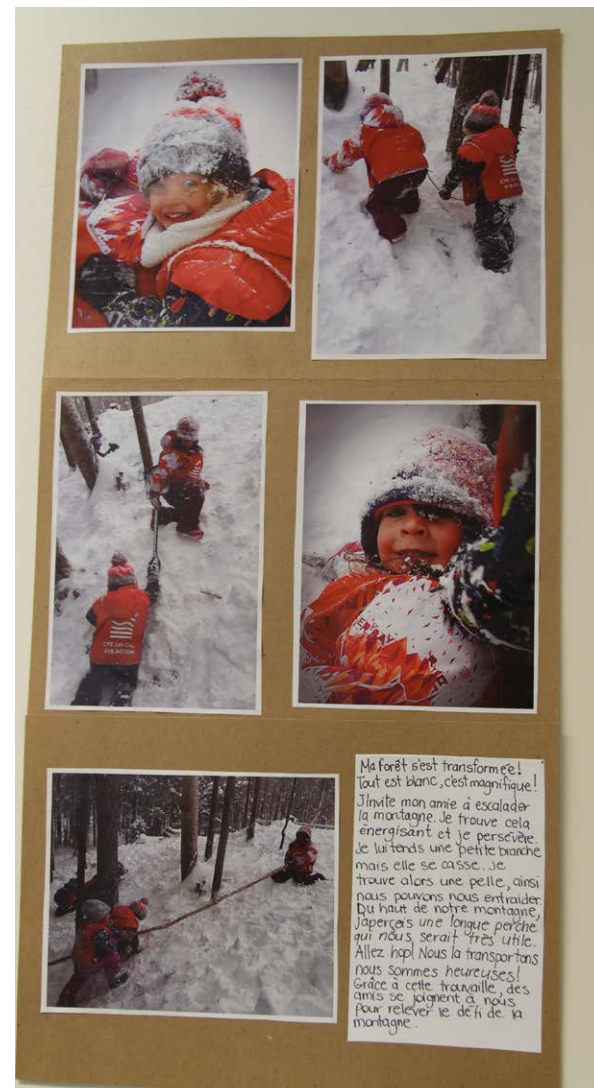
2.1 Set observation and documentation goals

When trying to figure out which situations to zero in on, it is important to set yourself relevant observation and documentation goals. These can vary a great deal. You will either choose them beforehand or in the spur of the moment, depending on the context or on what appears to be most meaningful. Sometimes you will have to wait quietly as you listen and observe before choosing an aspect to document.

Educators/HECPs who are only just starting out in nature-based education and pedagogical documentation may find it difficult to identify moments or situations that are rich and meaningful. They may be tempted to document everything that is going on, or, on the contrary, get the impression that nothing at all warrants interest. Over time, as they step back and analyze their pedagogical documentation, they will become more experienced and able to recognize situations likely to encourage reflection by highlighting the children's interests and learning.

A few examples of what you may want to target:

- One or two children in action: playing, exploring, leading initiatives, challenging themselves, making gestures, expressing attitudes, overall movement, etc.
- Preverbal or nonverbal signals (moods, feelings), especially in the case of toddlers
- Layout of the play environment, materials, aspects of the environment, etc.
- What the children are saying: conversations, reflections, questions, suppositions, theories, etc.
- Child-child interactions, child-adult interactions

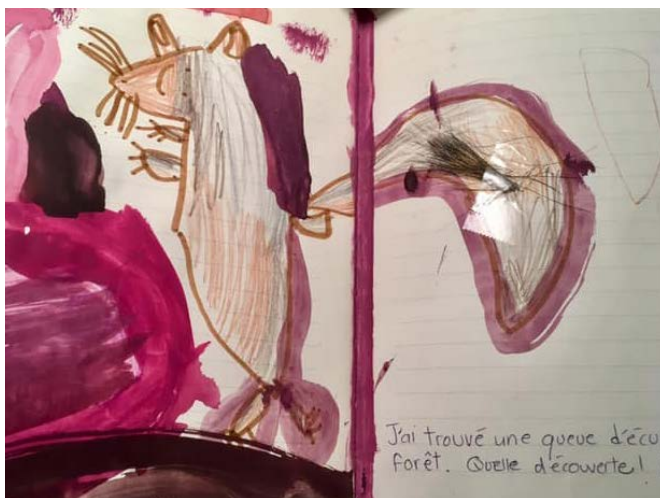


- The children's works of art and creations (drawings, collages, land art, landscape models, clay sculptures, constructions, etc.) as well as any photographs of the process of creation that:
 - Show the child's creative process
 - Represent something specific, something that is new for the child
 - Are associated with stories or photos that help make the child's thinking visible
- The questions the educators/HECPs or the children are asking
- The collective dynamics: transitions, routines, turn-taking, projects, etc.

2.2 Identify and collect the data

Educators/HECPs have a range of tools at their disposal to identify and collect records of the targeted situations. The important thing is to choose the appropriate tool that is best able to capture the essence of the moment.

- Photographs of an expression, gesture, look, or of something the child is looking at, etc. In the latter case, you can first photograph the child's face and then turn around and photograph the thing capturing the child's interest
- Video and audio recordings: for action sequences, challenges that have been overcome, interactions, discussions, etc.
- The educator's/HECP's logbook, either on paper or digital, which contains different sections:
 - Observation notes, reflections, the educator's/HECP's questions
 - The children's statements, records of their thoughts and language skills:
 - Verbatim, meaning the children's word-for-word utterances
 - Questions and suppositions
- The children's logbooks, which they may be regularly asked to use to relate, draw, or make a collage of what they experienced or observed in the natural environment or elsewhere. The logbook is an opportunity for the children to carry out their own pedagogical documentation





2.3 Sort and organize the records

As stated earlier, the educators/HECPs may find themselves faced with an abundance of records that seem chaotic. The point is to learn to see through the chaos, to make effective use of it.

To do this, the educators/HECPs glance over the photos, videos, and notes collected with to the goal of sorting/categorizing them. They examine the relevance of each record to check whether it provides any insights on the children's feelings, interest, initiatives, projects, inquiries, thoughts, or skills.

They then organize the records into categories or themes. For example, they might group together the records that show a certain aspect in one area of the children's

development, or the records that chart the evolution of a project.

2.4 Analyze and interpret the records

The next stage involves getting the gathered records to “say something,” to derive meaning from them, and to establish connections between the different aspects identified. The educators/HECPs proceed by viewing a video several times, checking a few photos against the observation notes made, by re-reading the suppositions they jotted down by the creek, and by asking questions.

At this point, there are several options for proceeding further:

- Identify the process that was implemented to carry out a project. For example, it may be possible to chart the execution of a project for setting up the base camp together with the children, along with the distinct roles each participant assumed at each of the different project stages.
- Identify the children's interests, behaviours, and preferred strategies. For example, how Timothé initially took just a cursory interest from afar in the anthill that two older children were observing, but then slowly drew nearer while seeking reassurance for his bold approach by checking for signs of approval from his educator. The educator discovers that Timothé is interested in insects and that he gradually draws nearer to the anthill.

- Analyze the meaning of a child's statement or action by referencing child development frameworks

While looking at photos picturing Éliane picking up small branches, Martine, her HECp, notes that the child's gripping technique has evolved over time. After consulting a book on gripping development, Martine has a better understanding of the changes she observed.

- Interpret by identifying the underlying concepts or theories; how do the records collected provide access to the children's perceptions and understanding of the world

When Rafik explains that the leaves turned red because they felt hot, his educator understands that he has established a connection with the sunburn his older sister suffered a few weeks earlier.

- To better accompany the children in their learning process, focus your findings and discoveries on the children's abilities or budding skills

Lucia likes to use language for reasoning. She now makes an effort to listen to her friend, who is explaining how to use a tool. Lucia's educator recognizes that she is beginning to take the perspective of others into account.

2.5 Use the most meaningful records

After first carrying out an analysis of the records collected on their own, the educators/HECPs may share with and compare their reflections, findings, and suppositions to those of others: children, colleagues, parents, etc. There are various ways to use the most meaningful records.

Based on the work done over the past several years in Pistoia,²⁰⁸ there are **four key ways to use meaningful records**:

- A **window into** the interests, budding skills, and whole-child development process, by establishing a **profile of each** child to be periodically updated
- An enabler to support **planning and reflection on the next educational activities**: provocations, materials, explorations, interventions, etc. When the documentation is shared with the children, for example, by giving them access to a binder inside the childcare facility, or photographs posted at eye-level, the educators/HECPs encourage them to step back and reflect on their past and future learning ventures
- A **mirror** for supporting **the educators'/HECPs' reflections** by making space for educators to journal on their practice, manner of interacting with the children, the learning objectives, and professional development as well as space for educators to reflect back on those journal entries.
- A **gateway** for **two-way communications with the families**, by making the children's actions and learning visible on a bulletin board, newsletter, etc.



2.6 Publish and circulate to communicate and share powerful ideas

Publishing is one of the phases of pedagogical documentation. It consists in choosing, organizing, and disseminating the selected and analyzed records among the children, parents, and even the community. This phase constitutes the collective memory of the experiences in nature-based education.

To create a GATEWAY between the parents and the educators/HECPs and initiate a dialogue around the children's experiences, you should choose a powerful but concise and inspiring message. Look for a central idea or a question for sharing and use this as the title of the publication... to serve as an invitation to engage in a discussion.

Suggestions for designing an educational publication:

- Choose a plain and neutral background. Black and white meet these criteria
- Limit the number of elements displayed to make the process and the learning visible. Choose them with care
- Use a concise caption reflecting the powerful idea at the centre of the experience, its main thrust
- Use text sparingly and stick to short sentences. If possible, write down the children's actual words, or their imagined thoughts
- Use close-ups of the aspects you want to highlight. You can crop photos and keep only the most significant parts
- A succession of photos of a single process can help illustrate a child's or the group's process
- Choose evocative language: Instead of saying "children develop their fine motor skills and self-control when they handle small animals," consider instead: "*I'm holding a wood frog in the palm of my hand. To make sure it trusts me, I need to keep calm and be gentle with it.*"

Various types of possible publications: newsletters, posters, portfolios, logbooks, notice boards, etc.

The benefits of publication for parents:

- Helps them understand how their children are developing, their skills and strengths
- Encourages a sense of wonder and understanding concerning developmental processes and the emergence of thinking skills
- Facilitates the parents' understanding of the support services employed in the childcare environment to help further the children's development
- Gives the parents a sense of being included in their children's experiences at the ECS
- Encourages parents to engage in dialogue, collaborate, and participate in the educational experience at the ECS

To help ensure that the pedagogical documentation becomes an ENABLER to help re-energize the children's explorations or complexify their play and questions, choose something that will help them dive back into the experience and recognize the experienced moment.

The benefits of publication for the children:

- Helps them step back, become aware of their motivations, explain their actions, etc.
- Helps recall an experience (memory)
- Facilitates discussion and narrative reconstruction
- Gives them time to react, to elaborate and diversify their thoughts and ideas, and to see pathways or a common thread emerge



The benefits of publication for the community:

- Contributes to highlighting/showcasing the ECS's role in the young children's lives
- Illustrates the momentous importance of the early years of life for development
- Helps gain an understanding of the importance of nature-based education for young children
- Encourages the community to engage in dialogue, and collaborate and participate in the nature-based education project



All my senses are awake in the forest, as I discover the world and its mysteries. I become a more and more competent thinker and explorer.



All my senses are awake in the forest, as I discover the world and its mysteries. I become a more and more competent thinker and explorer.

Nature-based education, an invaluable enabler for an inclusive approach

A four-year-old child arrives at the CPE in October after being excluded from another childcare facility. He introduces himself to the staff, saying “I am a violent child, and I’ve been expelled from my daycare!”

The following August, when he is about to start school, the CPE’s director asks him how he is going to introduce himself to his future teacher. He replies: “My name is Antoine, and I am very intelligent. I am really good at building things. I talk a lot, and I have a rich imagination!” Such a change of his self-perception, barely ten months later, prompts the director to state: “Mission accomplished!”



She realizes that nature-based education has given Antoine a chance to learn to know himself differently, to develop in a different context, where the natural environment, with its wide-open spaces and many challenges, led him to assume a role that is very different from the one that characterized him based on a more traditional concept of group life. Now he is demonstrating his creativity and leadership in the forest. He has become a model of agility and drive and daring for his peers. He is proud because the other children feel like imitating him, following his lead, rather than running away from him. Incidentally, he shows a lot of empathy while helping them overcome their limitations.

In the forest, he can be the best version of himself. And thanks to the caring facilitation and support he gets from his educator and the power of nature-based education, he will come to believe--slowly but surely--that this is perhaps the most authentic version of himself!

This may be only one example, but there are countless others! Nature-based education is an invaluable enabling tool for implementing an inclusive approach in early childhood education.

1. Why choose nature-based education as an inclusive approach?

The inclusive approach represents “all the means to ensure that the children fully participate in and contribute to the activities and the life of the group and develop their full potential as well as their sense of belonging to the group.”^{xx} This approach is integral to the threefold mission of Québec’s ECSs, as specified in the Accueillir la petite enfance education program.

«To ensure that everyone attending their childcare facilities can develop harmoniously, ECSs must foster equality of opportunity among the children, whether or not they have special needs and irrespective of their social, economic, cultural, or religious backgrounds. (...) ECSs must encourage the social inclusion of children with special needs by granting them a place among their peers, where they can participate in the daily activities and develop.»²⁰⁹



^{xx} Definition taken from the Carrick project, AQCE

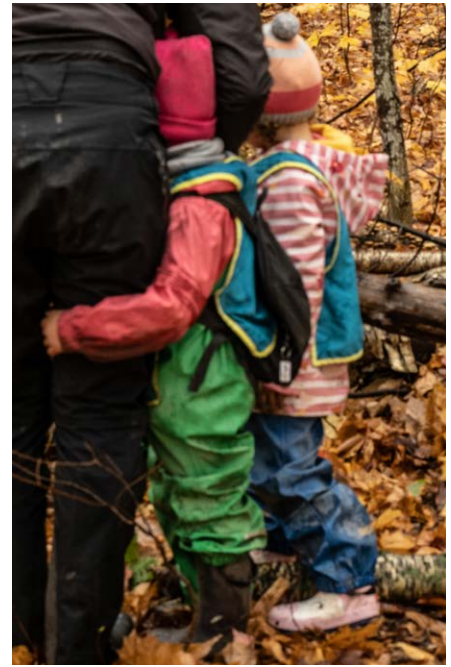
Nature-based education undoubtedly represents a context for implementing an inclusive approach in ECSs. These are the reasons why:

- Wider spaces to move around in and allow for vigorous and free self-expression Quiet areas to spend time alone or in small groups
- Less noise and less crowded
- Fewer rules and restrictions
- Soothing and engaging contact with the natural world
- More time to play at one's own pace
- Rich and constantly changing social and sensory experiences
- A multitude of stimulating challenges to overcome, which contribute to building a positive self-image and developing resilience and perseverance
- Emergent curriculum founded on the uniqueness and strengths of each child—their budding skills, initiatives, and interests—rather than on their deficiencies and difficulties
- No universal expectations of developmental progress, and therefore fewer comparisons between the children and less pressure to perform—something that is relevant for all children, in all contexts

In addition to offering children a rich and stimulating environment, the natural setting enables educators/HECPs to concentrate on their primary role, which is to facilitate and support every child's development. Far from the indoor environment of the childcare facility and the usual tasks associated with it, educators/HECPs are more available to observe, support, discuss, participate, and encourage, as well as document the children's progression and development.

All children can participate in and benefit from nature-based education. It does not matter if their parents have little financial means; or if the children only discover winter for the first time at the age of 4. They may be developing in accordance with universal developmental expectations or be children with autism. They may display an altered awareness of hazards. They may have motor, behavioural, or social difficulties, they may struggle to rein in their liveliness, or have a language disorder. None of these matters. Nature-based education is for all children!





2. How does one foster an inclusive approach in nature-based educational contexts?

To support inclusivity, ECSs, together with parents, should decide what adjustments need to be made to encourage everyone to participate and contribute fully to the nature-based educational journey.

A few suggestions:

- **Respect everyone's individual pace and offer an open and receptive presence**

Some children or their parents may have concerns or become apprehensive when the time comes to go on outings in the natural environment. The journeys there and back, the changing locations, the reconfigured routines, or variable weather conditions can cause children or their parents to feel insecure. ECSs should therefore show particular sensitivity to these mixed emotions.

« At the start of the year, it was difficult for some children. They didn't want to go too far inside the forest, or they didn't know how to play without toys. Some children become destabilized; it doesn't come easily to them. In those cases, I am also there to help them feel secure »³⁹

The educator/HECP should first ask the child or the parent to express themselves, while taking care to respect their pace. Then the educator/HECP, together with the parent, should identify some support and facilitation measures that may help the child adapt to the new environment.

³⁹ An educator with first-hand experience of the Alex – Éducation par la nature research project

- **Pay particular attention to the journey (to and from the nature site) and to transitions**

When the group is at the base camp, all the children find a comfortable spot and engage in play or exploration. The journeys there and back, however, may pose a few challenges. In some cases, the ECS will decide to use transportation equipment to make the longer journeys more manageable: a multi-seated stroller, a sleigh, etc. For some children, these transitions are a source of disorganization. As such, it is helpful to have some strategies ready to make the children feel safe in the lead-up to and during any journeys.

- **Encourage teamwork**

ECSs that adopt an inclusive approach need to ensure that all actors surrounding and/or involved with the children show solidarity in embracing a collective caring attitude. The educators, specialized educators, pedagogical leaders, food service managers, and HECPs understand the realities of the children and families and support one another so they can address the needs of each and every child. For example, to ensure that young Michael, who uses feeding tubes, can go to the forest together with his group, everyone got together for a meeting to figure out the best way to organize the snack. And when young Fabien bursts into tears, his educator can attend to him, secure in the knowledge that her colleague is looking after the other children in the group.

This solidarity and collective caring attitude can also find expression among the parents, when a parent partnering system is put in place, when parents are asked to accompany groups in the natural environment, or when the families exchange equipment with each other.



And finally, absolutely the greatest team players of all in the forest are the children themselves. There are countless situations involving mutual help and cooperation, ranging from transporting heavy branches to helping another child overcome a challenge.

« There was one young girl with a somewhat special developmental profile. (...) She was also quite small... She walked, but given the effort it took, she had a lot of difficulty and quickly grew tired. (...) At first, while walking to get to the forest, she often fell behind the others... Sometimes, we picked her up, but in the end, we pretended to throw her a rope and then pulled on the rope to reel her in. We all took turns, all the children did it! (...) She laughed. And when we got to the end of the imaginary rope, she would leap into the arms of whomever had reeled her in (...)»^{zz}

« (...) That child over there liked to climb onto a tree trunk, but it was difficult because he was so small. And so, the others would help him: 'All right, I'm going to help you! I will stand behind you so you don't fall!'»^{aaa}

- **Ensure an adult-to-child ratio that is appropriate to the needs and the context**

It may be advisable to add extra educators and adult chaperones (parents, grandparents, volunteers, etc.) during sessions in the natural environment to help make the journey easier, offer emotional support, and facilitate the children's play. For example, the great aunt of young Maeva, a girl with Down syndrome, accompanies her group of children during activities in the forest. What is the role of these adult chaperones? Except for very specific, one-off needs (during the journey, for example), it is important that they take their place as another adult within the group rather than the assistant of one child in particular. All children need to experience the sense of freedom that comes with being in a natural environment.

- **Let everyone benefit from emergent curriculum and acceptable risk-taking**

All children, regardless of whether they require specialized support, can benefit from emergent curriculum. Health specialists (speech therapists, physiotherapists, etc.) are encouraged to come and see how the sessions in the natural environment play out to adjust their recommendations to this unique context and keep in mind the principles of emergent curriculum.

The same goes for the importance of risk-taking. In the natural environment, all children can find a situation that involves an acceptable risk and a challenge to be overcome in line with their abilities. Furthermore, the records the educators/HECPs keep may help them communicate the observations made in the natural environment to the health specialists.

^{zz} An educator with first-hand experience of the *Alex – Éducation par la nature* research project

^{aaa} An educator with first-hand experience of the *Alex – Éducation par la nature* research project

- **Bear witness to every child's positive experience**

The educators/HECPs use pedagogical documentation to demonstrate each child's learning, the challenges they have overcome, their interests, and their budding skills. That way, the parents can more readily understand the wealth of their children's experiences in the natural environment and gain more confidence in what, at times, can seem like a destabilizing environment.

In short, nature-based education offers both new and traditional contexts that are particularly well-suited to the inclusive approach. The following examples speak for themselves:

« Our CPE is located in an urban area. The children and families we serve represent a truly diverse kaleidoscope, ranging from their socioeconomic status to their countries of origin, their needs for specialized support, and the challenges they face in learning the French language. This diversity may come with its own share of challenges, but it also unites us and makes us proud. Despite the many challenges, our five groups of children aged 3 to 5 head for the fields to immerse themselves in and experience the urban forest. We do this on two mornings every week, from the beginning of October until mid-June. »^{bbb}

« When we are in the forest, there are always at least two adults per group, meaning there are specialized educators present, who assume the role of early childhood educators. Two educators are better than one when you are working with a “pack of wolf cubs” requiring specialized support. In addition, a few parents accompany us as well. In fact, the CPE values the parents' involvement in the sessions in the forest. In addition to providing invaluable assistance, their presence strengthens the collaborative practices between the parents and childcare professionals, supports parenting skills, and helps the parents become more confident. They develop healthy lifestyle habits and make positive contributions founded on the principles of nature-based education. »^{ccc}

^{bbb} An educator with first-hand experience of the *Alex – Éducation par la nature* research project

^{ccc} An educator with first-hand experience of the *Alex – Éducation par la nature* research project



Conclusion

This reference guide is the result of efforts made by AQCPE and its many partners in response to the needs—voiced by educational childcare facilities—for benchmarks to accompany the implementation of nature-based education in Québec. These benchmarks are founded on scientific evidence as well as the experiences of educational childcare facilities in Québec. Whether your ECS is only just starting out or is already experienced in this new movement, we hope this reference guide will be useful, and inspire reflection as well as action.

Nature-based education is a suitable extension of the pursuit of quality practices already being undertaken in educational childcare facilities. Likewise, it harmonizes well with the practices connected to healthy lifestyle habits and free, active play that have been well established for many years in our network of childcare facilities.

As this movement is still in its infancy in Québec, we understand there is much to be said on the subject. The movement is expected to evolve over the coming years; it will become more fine-tuned and will expand thanks to the reflections, creativity, and experiences of everyone involved.

What is it we wish for? That this reference guide inspires more childcare facilities to embark on the nature-based education journey. Undoubtedly, the implementation of this approach will enable ECSs to fulfill their mission in close collaboration with families and communities. Moreover, it contributes to whole-child development and helps foster nature connectedness in Québec's young children, thus preparing them to tackle the challenges of the 21st century.





03

Toolbox



Exercises

Exercises to help incorporate the 8 principles of nature-based education. The solutions, suggestions, and hints connected to the exercises, which are grouped by principle, are listed on p. 213. Following the exercises are suggestions for reflection that will support each ECS in developing their own approach and a possible action plan.

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1. Experiencing a new approach to time

Below are two activity schedules for a group of children aged 3–4. The first schedule was drawn up at the time nature-based education was first introduced, the second one a year later. Comparing the two schedules, how would you describe the evolution of the variables on **duration, flexibility, and frequency**?

SCHEDULE AT TIME OF INTRODUCTION (FALL)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
WELCOME	In outdoor play space	In outdoor play space	In outdoor play space	In outdoor play space	In outdoor play space
A.M.	Snack indoors Transfer to outdoor play space	Snack indoors Outing in forest 9h45–11:30	Snack indoors Outing in forest 9h45–11:30	Snack indoors Transfer to outdoor play space	Snack indoors Transfer to outdoor play space
LUNCH	Indoor facilities	Indoor facilities	Indoor facilities	Indoor facilities	Indoor facilities
P.M.	Nap Playtime in indoor facilities	Nap Playtime in indoor facilities	Nap Playtime in indoor facilities	Nap Playtime in indoor facilities	Nap Playtime in indoor facilities
DEPARTURE	Winddown of indoor facilities and assembly in the gross motor skills room	Winddown of indoor facilities and assembly in the gross motor skills room	Winddown of indoor facilities and assembly in the gross motor skills room	Winddown of indoor facilities and assembly in the gross motor skills room	Winddown of indoor facilities and assembly in the gross motor skills room

SCHEDULE 12 MONTHS AFTER INTRODUCTION (FALL)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
WELCOME	In outdoor play space	In outdoor play space	In outdoor play space	In outdoor play space	In outdoor play space
A.M.	Flexible snack indoors Transfer to outdoor play space	Flexible snack in the forest Outing in forest 9h45–11:30	Flexible snack in the forest Outing in forest 9h45–11:30	Flexible snack in the forest Outing in forest 9h45–11:30	Flexible snack indoors Transfer to outdoor play space
DINER	Indoor facilities	Indoor facilities	Indoor facilities	In the forest	Indoor facilities
P.M.	Nap Snack indoors or in outdoor play space	Nap Snack indoors or in outdoor play space	Nap Snack indoors or in outdoor play space	Nap Snack indoors or in outdoor play space	Nap Snack indoors or in outdoor play space
DEPARTURE	In outdoor play space	In outdoor play space	In outdoor play space	In outdoor play space	In outdoor play space

2. Experiencing environments rich in biodiversity, loose parts, and open-ended materials

In the three pictures below, while acknowledging that none of the environments are perfect, identify the features that are consistent with and those that depart from the principle of environments rich in biodiversity, loose parts, and open-ended materials. Draw comparisons with your own outdoor play spaces.



Consistent	Depart from



Consistent	Depart from



Consistent	Depart from

3. Experiencing emergent curriculum

3.1 Challenges encountered in emergent curriculum

Suggest solutions for each of the challenges listed below.

Challenge	Suggested solution
<p>During the first outings in the natural environment, children can seem reluctant and unmotivated. They may go around in circles, flit around, and may not engage much in play or explorations.</p> <p>What would you do?</p>	
<p>When you adopt emergent curriculum, you are going to: lose some of your bearings, re-examine your role, and question the relevance of this approach.</p> <p>In the face of this sense of insecurity, how are you going to stay the course?</p>	
<p>Transitioning from a more structured to a natural environment can create an imbalance. Some children may become disruptive, scream, and run around.</p> <p>What can you do to facilitate these transitions and prevent outbursts?</p>	
<p>Realizing the rich rewards of free play, some educators/HECPs are reluctant to step in, fearing they could interrupt the children's momentum and engagement.</p> <p>What are some signs from the children that suggest the appropriate moment to initiate contact?</p>	
<p>Many educators/HECPs point out the difficulty of moving from scaffolding the children's play and explorations to a major project.</p> <p>What would you do to facilitate and support the emergence of a learning venture that will unfold over time?</p>	

3.2 What activities should you choose?

Many educational approaches emphasize contact with nature. As such, an experience centred on animal tracks can play out in different ways depending on the underlying vision of the child associated with the chosen approach.

- Read the three experiences that follow below.
- Decide which one is consistent with emergent curriculum, as advocated in nature-based education. Circle the number.
- Underline the elements in the text that indicate that the experience is consistent with an emergent curriculum.

The three experiences:

1. Learning session initiated by the educator/HECP or a resource person

The children are assembled in the outdoor play space. The adult hands out cards that picture the different animal footprints as well as cards that show the respective animals. The children attempt to recognize and match up the animals and their footprints. Dummy animal feet and modelling clay can be used to illustrate the footprint phenomenon.

2. Facilitated free exploration

The children play freely in the undergrowth. When one child discovers an animal track, they stop and call the others over. The educator approaches, takes a photo of the track with the children gathered around it. Asking the children questions, she focuses on identifying and comparing the animal track. Refraining from providing the answer, the educator asks the children how they can find out what the animal is. Back at the childcare facility, the educator posts the photo on the bulletin board along with the following words: "Animal footprint discovered this morning! But what animal was it and where was it going?" The next morning, the educator places a footprint identification guide on the table.

3. Fun activity of discovery

It starts with the reading of a story in which animals have left tracks in the snow. Then the children are asked to find photos of footprints hidden beforehand by the educator in several places in the outdoor play space or the forest. Following that, they have a chat and try to figure out what animal left the tracks.

4. Better understanding the facilitation continuum for children during play and exploration

Identify the role of the adult in each of these situations. It should be noted that, even though the roles of uninvolved bystander and director/redirector are included, it is **strongly encouraged** to adopt the other four roles of the continuum of facilitation for children during play and exploration.

At the end of the day, two children aged four and five are still at the home of Johanne, an HECP. The children mention that they want to take care of the vegetable garden while waiting for their parents to arrive. Johanne offers each of the children a watering can and gives precise instructions: "You have to water at the base of the plants, in the soil. Be careful not to water the leaves." She then suggests that they uproot the weeds and explains how to spot them. When one of the children is about to uproot a carrot top by mistake, Johanne gently redirects her by focusing her attention on the type of leaves that should be uprooted.

Uninvolved	<input type="radio"/>	Co-player/co-explorer	<input type="radio"/>
Onlooker	<input type="radio"/>	Play leader	<input type="radio"/>
Stage manager	<input type="radio"/>	Director/redirector	<input type="radio"/>

At base camp, a subgroup of children decides to play ninjas. They make it their mission to protect the squirrels in the forest from the evil werewolves. Fabienne, their educator, joins in the game. She becomes a ninja who has the power to see far, far away. She positions herself in such a way as to be able to keep an eye on the whole group and takes part in the ninja game by sending the children off on exploration missions: "I think I saw werewolf tracks behind that rock over there! We should go and investigate because it could be dangerous!"

Uninvolved	<input type="radio"/>	Co-player/co-explorer	<input type="radio"/>
Onlooker	<input type="radio"/>	Play leader	<input type="radio"/>
Stage manager	<input type="radio"/>	Director/redirector	<input type="radio"/>

Joëlle is an educator who opens up the courtyard of the childcare centre this morning. Before the children arrive, she takes out the bin of freely available, versatile equipment and makes it available to the children: large wooden blocks, boards, spools, pipes, and water bottles. There are now six children in the courtyard. Amine arrives with his father. He has just returned from a short hospital stay following an allergic reaction. While supervising the children as they play with the various items, Joëlle chats with the parent to find out the relevant information regarding Amine’s health and safety.

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| Stage manager | <input type="radio"/> | Director/redirector | <input type="radio"/> |

The children in Cindy’s group are very interested in playing in the sandbox. In addition to the equipment that is always available, Cindy has brought several unusually shaped and colored stones. While the children are building castles, she discreetly hides her stones all over in the sandbox. While digging, the first child brings her their find. She exclaims: “Where did you find this stone? Do you think there are others?” All the children, intrigued and excited, set off in search of the hidden stones. Cindy then offers them small containers so they can put the ones they find inside.

- | | | | |
|---------------|-----------------------|-----------------------|-----------------------|
| Uninvolved | <input type="radio"/> | Co-player/co-explorer | <input type="radio"/> |
| Onlooker | <input type="radio"/> | Play leader | <input type="radio"/> |
| Stage manager | <input type="radio"/> | Director/redirector | <input type="radio"/> |

Jordane is lying on her stomach on the ground and is looking at a small hole in the ground. Sonia, her teacher, comes to join her. Jordane exclaims:

- Look, it's a fairy house! I'm going to see if there are any fairies inside!

Sonia replies:

- Oh! What makes you think it's a fairy house?
- It's very small. Fairies live in the forest and are very small. I saw that on TV, says Jordane.
- Then it's a good idea to look there! Are there any other clues that might tell us it's a fairy house?
- Usually, there are magic red mushrooms near their house. Here, the mushrooms are brown. But I still think it's a fairy house!

Jordane adds:

- We should make a little door so that the rain doesn't get into their house.

Sonia asks her:

- What would we need to build this door?

Jordane replies enthusiastically:

- I saw pieces of bark over there that would be perfect! And she runs off to get them.

Uninvolved	<input type="radio"/>	Co-player/co-explorer	<input type="radio"/>
Onlooker	<input type="radio"/>	Play leader	<input type="radio"/>
Stage manager	<input type="radio"/>	Director/redirector	<input type="radio"/>

Julia and Anaé each have their own insect box. They are busy putting leaves, stones, and twigs inside to make a home for the snails they caught earlier. They are well into their game, exchanging materials and discussing their ideas for a bed, a table, a TV... Although the two girls sometimes get a bit upset with each other, they manage to resolve their differences on their own. Mélissa, their educator, stands close to them, while keeping an eye on the rest of the group. She notes down in a small notebook the strategies the children use to arrange their snail house and the way they go about resolving their minor conflicts.

Uninvolved	<input type="radio"/>	Co-player/co-explorer	<input type="radio"/>
Onlooker	<input type="radio"/>	Play leader	<input type="radio"/>
Stage manager	<input type="radio"/>	Director/redirector	<input type="radio"/>

5. Experiencing a close partnership with the parents

Below are the first-person accounts of families whose children are experiencing nature-based education. Match each account with one or more principles of the family-centred approach implemented by the ECS. Specify the reasons you made this association.

Principles:

1. Recognize the knowledge and expertise of the other
2. Foster two-way communications
3. Share power and decision-making
4. Respect and value diversity
5. Create more extensive support networks

Families' accounts	Principles 12345	Reasons
<p>At first, I was skeptical about the idea of my son spending ½ days in the woods. I was wondering what he would do there, in particular since he is being assessed for a possible autism spectrum disorder. Mireille (the HECP), who believed Nathan could benefit from nature-based education, asked me if I would like to see some photos and short videos so I could get a better idea. I was happy to know that I could see how it worked. After a few outings in nature, Mireille invited me to come to the forest and ask my questions. I shared with her what I saw in my child and she told me: "I see what you are saying. I, too, have noticed how Nathan has been gaining self-confidence over the past several weeks." I realized that she truly wanted everyone to feel good about the experience, and that is something I truly value and appreciate. I even decided to share with her the video I took of Nathan when he and I went to explore the ravine together.</p>		
<p>I was so happy when my grandson got to spend time in contact with nature! What's more, they asked us if we had any logs, branches, or other natural objects for the childcare facility's indoor areas. I told myself that the seashells I brought back from my vacations would be put to better use in the CPE than in my cupboards! They even put together a committee with the CPE's parents to reflect on transitioning towards more natural and unprocessed elements in all the CPE's rooms and try and phase out some of the plastic. They realized that as a group they had lots of ideas for the good of the children. Every month, the children eagerly wait to see what new ideas and things they have come up with!</p>		

Families' accounts	Principles 12345	Reasons
<p>When we got to Jean-François's place, he told us that he often took the children to the woods behind his house. While I found the idea very interesting, I immediately worried that we weren't properly equipped for winter yet! Where I am from, it is a lot hotter than here! He gave me a list describing the kind of clothing that was essential for keeping warm. I called the Maison des familles in my neighbourhood to see whether they had any such clothing. They told me that they always organize a special winter clothing and equipment sale in the run-up to winter. I let Jean-François know, and he shared the information with the other parents. He also told me that he always has a few spare clothing items on hand at home, just in case. Despite everything, I was afraid that Bouchra would be cold. Jean-François said he understood. He asked me how I could tell the signs that indicated my daughter was uncomfortable. Reassured, I decided to give the experience a shot with this HECF. A few weeks later, Bouchra began to tell me how much she loved the forest and that "snow isn't all that cold after all!" I am glad that Jean-François took the time to listen and talk to me about it all. Otherwise, I might have missed giving this wonderful experience to my daughter.</p>		

6. Experiencing close collaborations with the community

Below are some of the challenges encountered by childcare facilities experimenting with nature-based education. In the face of these challenges, collaboration with the community can act as an enabler or potential solution. How would you handle these challenges?

Challenge	Enablers and solutions
<p>Difficulty accessing and journeying to the sites</p> <p>The chosen forest is located more than one km away, unless the children can take a shortcut by passing through a neighbour's property</p>	
<p>The site managers are apprehensive about or misunderstand nature-based education</p> <p>To make the forest welcoming and safe for the children, the owner clears the ground of all branches, stones, and other natural debris</p>	
<p>The concerns of environmental groups seeking to preserve natural spaces</p> <p>These groups demand that the children stay on the paths at all times</p>	
<p>Collaboration with groups that embrace different pedagogical practices</p> <p>An organization providing introductions to astronomy has contacted the ECS about coming to facilitate adult-directed activities for the children</p>	
<p>Sharing the site with other users</p> <p>During winter, cross-country skiers use ski tracks located in the same area of the forest as the children</p>	

7. Experiencing a balanced approach to risk and safety

7.1 According to the situations outlined below, all of which involve risks, what mitigating measures could be adopted with a view to balancing risk and safety?

- Presence of mosquitoes or ticks

- Dead branches hanging in the trees

- Nearby waterway

- Episode of heavy rain

- Weeping willow with low-hanging branches that are tempting to climb

- Major presence of nettles around the base camp

- Approaching thunderstorm cell

- Use of saws

- Tag race in the undergrowth

7.2 If you found yourself in the following situation, what would you do?

Several children initiate symbolic play at the base camp. There are crocodiles and hunters. One child picks up an approximately 2 m-long branch and proposes a play fight. Other children enter the fray, holding long branches as well. Perched on logs 40 cm above the ground, the combatants move around brandishing their swords. A girl calls out to the combatants as she crosses the battlefield. She positions her arms in front of her to protect her eyes as she passes beneath the branches. All are very engaged and enthusiastic and smile from ear to ear.

• Your decision:

- No intervention
- Mitigation
- Redirection
- Prohibition

• Underline the elements in the text that influenced your decision

8. Experiencing the fostering of nature connectedness

An ECS located in an urban area does not have access to any nearby natural environments. How can the ECS sustain the children's sense of wonder towards the natural world?

One of your colleagues is highly engaged in environmental protection. You observe that she wants to convince the children to follow her lead. She encourages them to take action to save the planet and to fight climate change and rising sea levels. You heard her tell the children that if their parents continue to keep their engine running when they stop their car, soon there won't be any humans left on earth. What are your thoughts of this situation?

Several groups of children take turns going to the same base camp. A few months later, you notice that the ground has been trampled flat and that nothing grows there anymore. What can you do to diminish your impact on the site?

How can ECSs adopt eco-friendly practices to overcome the following challenges?

- Food waste

- Furniture and play equipment containing a significant amount of plastic

- Daily use of air conditioning between May and September

A critical look at your approach to nature-based education

For each of the eight principles, consider carrying out the following steps:

- 1) Complete the **self-assessment tool** [here](#). It can help you draw up a profile of each principle's implementation in your childcare facility. You can also refer to the key characteristics listed at the end of each chapter.
- 2) To help refine your practice, identify your **priorities for action** in connection with each principle. Make sure to be realistic!

- 3) Identify the possible **constraints** and **solutions** connected to your priorities.

- **Constraints/challenges**

- **Solutions**

Enter everything into **your action plan** to ensure you can review and follow-up on your actions.



Answer keys for the exercises

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3. Solution for the exercise concerning emergent curriculum214
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1. Solution for the exercise concerning a different approach to time

Analysis of the activity schedules

In the first schedule, we can observe that the groups **frequent** the natural environment two times every week for a **duration** of approximately 1 hour and 45 minutes each time. Furthermore, a substantial part of the morning is spent outdoors, including the welcome in the outdoor play space and the play periods following snack breaks on Mondays, Thursdays, and Fridays.

Spending a substantial amount of time outdoors every day, regardless of the precise location, is a good way to help children become accustomed to and appreciate various temperatures. It is also a good starting point for increasing the time spent in natural environments once the logistics associated with the snack and traveling to and from the natural site are established.

This progression can be seen in the second schedule. Owing to the addition of outdoor snack breaks, the morning activities in the forest on Tuesdays and Wednesdays have increased from 1 hour and 45 minutes to 2 hours and 30 minutes (**increase in duration**). These changes were made possible thanks to a degree of flexibility, notably the collaboration of the food services manager and the reorganization of lunch hours. Moreover, we can observe the addition of a third day in the forest, on Thursday (increased frequency), during which the groups get to experience lunch in the forest. That way, they spend even more time there. Finally, we can see that most of the time, the end-of-day periods take place outdoors. As such, this childcare facility has significantly enhanced its parameters of **frequency and duration** of exposure to nature.

As concerns **regularity**, we should keep in mind that by establishing and disseminating this type of schedule, we may help prepare several relevant stakeholders: parents, children, educators/HECPs, and food service managers. This regularity also contributes to better levels of preparation for **various weather conditions**.

Reminder: Be flexible in your judgment—it is up to you to determine the right pace for enhancing the duration and frequency in nature that is appropriate for your childcare facility!

2. Solution for the exercise concerning environments rich in biodiversity, loose parts, and open-ended materials



Consistent

- Natural surface areas
- Vegetable garden
- Symbolic play area
- Raw materials (wood, gravel, sand, wood chips) Covered areas
- Logs that pose a challenge

Depart from

- No small loose parts or open-ended materials visible in the photo
- Minimal biodiversity
- No sloping terrain
- No water supply



Consistent

- Nothing at all, except sunshades

Depart from

- No loose parts or open-ended materials visible in the photo
- No raw materials
- Artificial surface areas
- Fixed playground equipment
- Few diversified play areas
- No water supply or sloping terrain



Consistent

- Natural environment
- Lots of loose parts and open-ended materials (branches, logs, rocks)
- Evidence of biodiversity
- Trees and child-built dwellings serving as shelters
- Shaded areas underneath the trees

Depart from

- No sloping terrain
- No water supply

3. Solution for the exercise concerning emergent curriculum

3.1 While not exhaustive, below are some guidelines for reflection and possible solutions to challenges encountered in emergent curriculum.

Challenges	Possible solutions
<p>During the first activities in the natural environment, the children can seem reluctant and unmotivated. They go around in circles, flit around, and don't engage much in play or explorations.</p> <p>What would you do?</p>	<p>You need to know how to accept periods of roaming or boredom. This wavering is sometimes necessary. The educators/ HECsPs can seize the opportunity to observe how each one of the children reacts: Are they observing their peers or their environment? Are they handling the materials? Are they undertaking a project?</p> <p>Hint: Marie-Pierre, a nature-based educator, emphasizes the "20-minute rule": "Often it takes 20 minutes before the children move on from roaming or the initial boredom to engaging in play or a more complex project."</p>
<p>When you adopt emergent curriculum, you are going to: lose some of your bearings, re-examine your role, and question the relevance of this approach.</p> <p>In the face of this sense of insecurity, how are you going to stay the course?</p>	<p>Hint: It can be helpful to keep in mind the three levels of trust.</p> <ol style="list-style-type: none"> 1- Trust in the children's ability to mobilize, create, express themselves, and undertake a challenge. This ability develops over time. 2- Trust in the natural environment. Once the children come to feel at home in it, it proves to be richer and more inspiring than manufactured environments or environments designed to be educational. 3- Develop trust in one's own abilities as an adult guiding figure.
<p>Transitioning from a more structured to a natural environment can create an imbalance. Some children may become disruptive, scream, and run around.</p> <p>What can you do to facilitate these transitions?</p>	<p>The initial disorganization can be diminished by organizing an assembly at the base camp. This strategy makes it possible to signal the change of place or atmosphere and help the children adopt a state of mind conducive to a sense of wonder, play, and explorations. It is also possible to take advantage of this moment to remind the children of the instructions and resume some of the ventures that had to be suspended during previous activities.</p> <p>Hint: Create a rite of passage specific to the group. This could be a song or poem, a sensory grounding moment, a piece of music, etc.</p>

Challenges	Possible solutions
<p>Realizing the rich rewards of free play, some educators/HECPs are reluctant to step in, fearing they could interrupt the children’s momentum and engagement.</p> <p>What are the observable signs in the children that enable you to identify the appropriate moment to initiate contact?</p>	<p>Plus on observe les enfants dans le jeu, plus on devient habile à repérer les moments propices à l’entrée en scène de l’adulte, et la juste place à occuper.</p> <ul style="list-style-type: none"> ● When the children take a break, even just briefly ● When the children look at the adult ● When they encounter a difficulty and become discouraged When they make a comment or ask a question ● When the initial enthusiasm or momentum stalls a little, but you feel it can be revived ● When they are proud of an accomplishment <p>Hint: When stepping into a play situation, you need to keep observing how the children respond to your arrival on the scene. Does your presence serve to revive the enthusiasm and complexify the play? Or, on the contrary, do the children stop and abandon the play? Or do they become passive, expecting the adult to direct the play? These are concrete signs that help the educators/HECPs readjust their positions.</p>
<p>Many educators/HECPs point out the difficulty of moving from scaffolding the children’s play and explorations to a major project.</p> <p>What would you do to facilitate and support the emergence of a learning venture that will unfold over time?</p>	<p>The emergence of a larger scale project cannot be imposed or directed by the educators/HECPs. However, they can keep records (photos, videos, objects, drawings, suppositions, etc.) of the daily experiences and share them with the children on the same or next day, or several days or weeks later. By revisiting these records, the children are sometimes inspired to resume an earlier initiative.</p> <p>Hint: The educators’/HECPs’ questions, comments, support, and additional materials can help the children establish a common thread across smaller projects/activities.</p>

3.2 What activities should you choose?

The activity most consistent with emergent curriculum is the **second** one. The sections **highlighted** in the text below illustrate why.

Facilitated free exploration

The children **play freely** in the undergrowth. When **one child** discovers an animal track, they stop and call the others over. The educator **approaches, takes a photo** of the track with **the children gathered around it. Asking the children questions**, she **focuses on identifying and comparing** the animal track. Refraining from providing the answer, the educator **asks the children** how they can find out what the animal is. Back at the childcare facility, the educator **posts the photo on the bulletin board** along with the following words: “Animal footprint discovered this morning! But what animal was it, and where was it going?” The next morning, the educator places a **footprint identification guide** on the table.

The activities of ***the learning session initiated by the educator/HECP or a resource person*** and ***the joyful activity of discovery*** may at first seem like stimulating and enticing options. However, from the moment the adults initiate these kinds of activities, the children are likely to assume a passive role, as they wait for the adults to organize the children’s life and play. While these educational sessions often start with good intentions, they can prompt the adult to assume too much of a director role. A better use of this kind of activity is to take just a few of its ideas and offer them as inspiration to the children.

4. Solution to the High-quality educational interactions exercise

At the end of the day, two children aged four and five are still at the home of Johanne, a HECP. The children mention that they want to take care of the vegetable garden while waiting for their parents to arrive. Johanne offers each of the children a watering can and gives precise instructions: “You have to water at the base of the plants, in the soil. Be careful not to water the leaves.” She then suggests that they uproot the weeds and explains how to spot them. When one of the children is about to uproot a carrot top by mistake, Johanne gently redirects her by focusing her attention on the type of leaves that should be uprooted.

Answer: Director/redirector

At base camp, a subgroup of children decide to play ninjas. They make it their mission to protect the squirrels in the forest from the evil werewolves. Fabienne, their educator, joins in the game. She becomes a ninja who has the power to see far, far away. She positions herself in such a way as to be able to keep an eye on the whole group and takes part in the ninja game by sending the children off on exploration missions: “I think I saw werewolf tracks behind that rock over there! We should go and investigate because it could be dangerous!”

Answer: Co-player/co-explorer

Joëlle is an educator who opens up the courtyard of the childcare centre this morning. Before the children arrive, she takes out the bin of freely available, versatile equipment and makes it available to the children: large wooden blocks, boards, spools, pipes, and water bottles. There are now six children in the courtyard. Amine arrives with his father. He has just returned from a short hospital stay following an allergic reaction. While supervising the children as they play with the various items, Joëlle chats with the parent to find out the relevant information regarding Amine’s health and safety.

Answer: Uninvolved

The children in Cindy’s group are very interested in playing in the sandbox. In addition to the equipment that is always available, Cindy has brought several unusually shaped and colored stones. While the children are building castles, she discreetly hides her stones all over in the sandbox. While digging, the first child brings her their find. She exclaims: “Where did you find this stone? Do you think there are others?” All the children, intrigued and excited, set off in search of the hidden stones. Cindy then offers them small containers so they can put the ones they find inside.

Answer: Stage manager

Jordane is lying on her stomach on the ground and is looking at a small hole in the ground. Sonia, her teacher, comes to join her. Jordane exclaims:

- Look, it's a fairy house! I'm going to see if there are any fairies inside!

Sonia replies:

- Oh! What makes you think it's a fairy house?
- It's very small. Fairies live in the forest and are very small. I saw that on TV.
- Then it's a good idea to look there! Are there any other clues that might tell us it's a fairy house?
- Usually, there are magic red mushrooms near their house. Here, the mushrooms are brown. But I still think it's a fairy house!

Jordane adds:

- We should make a little door so that the rain doesn't get into their house.

Sonia asks her:

- What would we need to build this door?

Jordane replies enthusiastically:

- I saw pieces of bark over there that would be perfect! And she runs off to get them.

Answer: Play leader

Julia and Anaé each have their own insect box. They are busy putting leaves, stones, and twigs inside to make a home for the snails they caught earlier. They are well into their game, exchanging materials and discussing their ideas for a bed, a table, a TV... Although the two girls sometimes get a bit upset with each other, they manage to resolve their differences on their own. Mélissa, their educator, stands close to them, while keeping an eye on the rest of the group. She notes down in a small notebook the strategies the children use to arrange their snail house and the way they go about resolving their minor conflicts.

Answer: Onlooker

5. Solution for the exercise concerning close partnerships with parents

Below are the first-person accounts of families whose children are experiencing nature-based education. Match each account with one or more principles of the family-centred approach implemented by the ECS. Specify the reasons you made this association.

1. Recognize the knowledge and expertise of the other
2. Foster two-way communications
3. Share power and decision-making
4. Respect and value diversity
5. Create more extensive support networks

Families' accounts	Principle 12345	Reasons
Nathan's father	1 2 4	<p>1st – During the activity outside, we can see that the educator also welcomes the parent's observations and, by validating the observations, recognizes their value as a contribution.</p> <p>2nd - The parent is welcomed to voice his concerns; he is listened to. The HECP encourages dialogue. She offers photos and videos. The parent is invited to spend time in the forest to expand and consolidate their discussions on the subject. The father actively participates in the discussion by sharing a video.</p> <p>4th - The HECP openly welcomes this child and his father. She is convinced that nature-based education is for everyone.</p>
A travelling grandmother	1 2-3 5	<p>1st – By calling on the families to gather natural materials, the CPE recognizes their skills in doing so.</p> <p>2nd-3rd – By asking the parents to participate and by setting up a committee, the families can play an active part in the CPE. One senses that this grandmother is proud of her contributions to and participation in the project (empowerment). Moreover, it encourages discussions and the sharing of ideas and concepts between the ECS and the families.</p> <p>5th - This type of action fosters links between the families, which contributes to the fifth principle.</p>
Bouchra's mother	1 2 4 5	<p>1st - The HECP recognizes that the mother has sound knowledge of the signals her daughter gives off as well as the available resources in the neighbourhood.</p> <p>2nd - The HECP listens to the experiences of this family. He discusses possible solutions with the mother.</p> <p>4th - The HECP understands and welcomes Bouchra, for whom this is the first experience of snow. He understands the reality of this family who has only just arrived in Québec. He wants to support them so they can experience nature-based education.</p> <p>5th - The HECP shares with all the families the information concerning the Maison des familles.</p>

6. Solution for the exercise concerning close collaborations with the community

Below are some examples, reflections, and possible solutions to the challenges presented.

Challenges	Solutions
<p>Difficulty accessing and traveling to the sites</p> <p>The chosen forest is located more than one km away, unless the children can take a shortcut by passing through a neighbour's property</p>	<ul style="list-style-type: none"> • Find out who the chosen site's owners or managers are • Verify the right to spend time on the site (insurance, hazards, etc.) • Check if there are any costs associated with accessing the site. If yes, are there any potential opportunities to collaborate and reduce costs? • Identify the different issues connected to traveling to and from the site: <ul style="list-style-type: none"> ■ Means of transportation (on foot, by bus or bicycle, etc.) ■ The different access routes and constraints to consider (for example: protection of a field that is being cultivated) ■ Potential partners: transportation service, owners of the land providing the access route, etc.
<p>The site managers are apprehensive about or misunderstand nature-based education</p> <p>In an attempt to make the forest welcoming and safe for the children, the managers clear the ground of all branches, stones, and other natural debris</p>	<ul style="list-style-type: none"> • Share your expertise in nature-based early childhood education with the site manager: make the project known, take the time to present the mission, goals, and preferred approaches • Embrace two-way communication, listen to the managers' concerns. Engage with the managers to learn from their expertise (knowledge of the site, including its potential and limitations) • Share any available photographs or videos that illustrate the children's experiences as well as the balanced approach to risk and safety with the managers • Had the managers known that nature-based education values sites that are rich in small, loose materials, they may not have spent their time and resources on clearing the land
<p>The concerns of environmental groups seeking to preserve natural spaces</p> <p>These groups demand that the children stay on the paths at all times</p>	<ul style="list-style-type: none"> • Become allied with these organizations. They are a goldmine of information and are well-placed to advise ECSs about strategies for preserving the natural site being used: for example, particularly sensitive ecosystems or species, nesting and hatching periods, the capacity for regenerating certain areas, invasive species, etc. • The CPE invited the local nature conservation organization's biologist to visit its forest. The biologist informed the CPE of the site's interesting features and specific aspects to consider: ecological dynamics, elements requiring protection, etc.

Challenges	Solutions
<p>Collaboration with groups that embrace different pedagogical practices</p> <p>An organization providing introductions to astronomy has contacted the ECS about coming to facilitate adult-directed activities for the children</p>	<ul style="list-style-type: none"> • Before undertaking joint activities, listen and share each other's visions, and seek a collaborative approach. • Several weeks before the activity, the ECS's pedagogical leader took the time to have a discussion with the organization's facilitator, who had prepared an organized activity for the children. The pedagogical leader first examined and listened to the facilitator's plans. She informed the facilitator of the approach used in the ECS. She suggested reconsidering the activity and working together on its execution so they could include emergent curriculum elements while also respecting the organization's vision.
<p>Sharing the site with other users</p> <p>During winter, cross-country skiers use ski tracks located in the same area of the forest as the children</p>	<ul style="list-style-type: none"> • Announce one's presence on the site in a friendly and collaborative manner: for example, a small poster with the name of the ECS and the project and a few activity examples. If relevant, point out the ECS's needs: "Please leave the base camp intact," etc. • Identify the different users. • Engage with them so each party can air their concerns and seek to achieve common ground.

7. Solution for the exercise concerning a balanced approach to risk and safety

7.1 Mitigation measures that may be adopted in the following situations, all of which involve risks:

- **Presence of mosquitoes or ticks**
 - Adapted clothing: long sleeves, closed footwear, etc.
 - Body inspection upon return
 - Avoiding tall grasses in areas where animals (particularly deer) are likely to travel through.
- **Dead branches hanging in the trees**
 - Removal of hanging branches or avoidance of area
- **Nearby waterway**
 - Clear boundaries and instructions
 - Designated play area
 - Constant supervision
- **Episode of heavy rain**
 - Installation of one or more tarps at the base camp
- **Weeping willow with low-hanging branches that are tempting to climb**
 - Check the strength of the branches
 - Targeted support of the children when they assess risks
- **Major presence of nettles around the base camp**
 - Nettle leaf identification exercise (laminated photos)
 - Adapted clothing: long sleeves, closed footwear, etc.
 - Restricted access to the densest areas of growth
- **Approche de cellules orageuses**
 - Repli vers un abri sécuritaire ou annulation de la sortie
- **Use of saws**
 - Operating environment for various tools: clear designated area, recommended techniques, etc.
 - Adults remain nearby and provide enhanced supervision
- **Game of tag in the undergrowth**
 - Prior risk identification by the children
 - More sustained adult presence, if needed

7.2 A balanced approach to risk and safety in play-fight situations involving long branches

There are different options available, depending on the children's and adults' comfort level and experience.

At the beginning of the year, the educator could **redirect** the play towards play-fight situations in pairs to become familiar with the activity and necessary caution so that the play remains pleasant. The educator could also **mitigate** the risks, by asking the children to select shorter branches or to stick to playing on the ground. She could also prohibit the young girl from crossing the 'battlefield'.

Since this situation occurred near the end of the year, the educator chose not to intervene, while nevertheless staying nearby. The play proceeded pleasantly and without incident.

Elements in the text that influenced this decision

Several children initiate symbolic play at the **base camp**. There are crocodiles and hunters. One child picks up an approximately 2 m-long **branch** and **proposes a play-fight**. **Other children** enter the fray, holding long branches as well. **Perched on logs 40 cm** above the ground, the combatants **move around brandishing their swords**. A girl calls out to the combatants as she **crosses the arena**. She positions her arms in front of her **to protect her eyes** as she **passes beneath the branches**. All are very **engaged and enthusiastic and smile from ear to ear**.

The educator's/HECP's decision: no intervention, stays nearby. Throughout the year, the children develop self-confidence, sensitivity, and empathy, as well as an ability to regulate their movements.

8. Solution for the exercise concerning the fostering of nature connectedness

- An ECS located in an urban area does not have access to any nearby natural environments. How can the ECS sustain the children’s sense of wonder towards the natural world?
 - There are several possible options, including: Naturalization of the ECS’s indoor and outdoor facilities; exploration of non-living elements (shadows and light, wind, precipitation, sand and water, etc.); recordings of birdsong or the vocalized sounds of mammals, etc.
- One of your colleagues is highly engaged in environmental protection. You observe that she wants to convince the children to follow her lead. She encourages them to take action to save the planet and to fight climate change and rising sea levels. You heard her tell the children that if their parents continue to keep their engine running when they stop their car, soon there won’t be any humans left on earth. What are your thoughts of this situation?
 - The approach to stimulating nature connectedness in young children aged 0–5 should avoid playing on their fears. The children could feel powerless and anxious. It is much more important to foster their sense of wonder and curiosity and build on their attachment to nature. Your colleague could channel her activism into starting up a sustainable development committee at the ECS, for example.
- Several groups of children take turns using the same base camp. A few months later, you notice that the ground has been trampled flat and that nothing grows there anymore. What can you do to diminish impact on the area?
 - Consider setting up other base camps elsewhere in the chosen natural environment, as well as a rotation system to allow for the regeneration of the trampled spaces
 - Limit yourself to just a single location for a base camp and accept that it will need to be “sacrificed”
 - Reach out to the site’s manager/owner or an environmental protection organization and assess the available options with respect to the specifics of the different ecosystems
- What eco-friendly practices can ECSs adopt to overcome the following challenges?
 - Food waste: composting; revised food quantities by the food services manager; participation of the children in choosing portion sizes, etc.
 - Significant plastic content in the furniture and play equipment: immediate or gradual replacement; donate withdrawn articles; adapt purchasing policies, etc.
 - Daily use of air conditioning between May and September: addition of vegetation or awnings around the window areas; blinds for limiting the impact of the sun’s rays, etc.



Technical information sheets

Specific advice on concrete questions that ECSs may have when introducing nature-based education:

1. Hooray for natural and recycled loose parts and open-ended materials! 226
2. Choice and layout of the base camp 228
3. No such thing as poor weather—only poor choice of clothing! 230
4. Start-up equipment 232
5. Eating outdoors 234
6. Hygiene in natural environments 236
7. Outdoor rest and relaxation 238
8. Using tools in natural environments 240

HOORAY FOR NATURAL AND RECYCLED LOOSE PARTS AND OPEN-ENDED MATERIALS!



Playing with loose parts and open-ended materials lets children think for themselves, develop their imagination and creativity, challenge ideas, resolve problems, and try out and analyze different options.

The mobility and malleability of these materials encourages collaborative work and creativity. And finally, they have the advantage of being gender/culturally neutral and free from stereotypes.



Loose parts: mobile, unattached materials that the children can transport, combine, and transform as they wish, in accordance with their ideas and projects.

Open-ended materials: materials that have no pre-set function or identity. As they aren't destined for any particular use, they represent nothing in particular.

Originating in the natural environment: materials derived from mineral, vegetable, or animal sources (shells, feathers, exoskeletons, etc.), as well as natural elements (water, light, air, etc.).

Salvaged/recycled: materials provided by families, manufacturers, businesses, artisan's workshops; containers or other objects at the end of their first cycle of use, etc.

How and where can you find loose parts and open-ended materials?

- Appeal to the stakeholders connected to your ECS: colleagues, parents, grandparents, etc.
- Explore your neighbourhood: recycling depots, jumble sales, businesses or workshops, etc.
- Browse the web for product swap and sale sites
- Gather them in natural environments, while minimizing their impact on the local environment.

- Think **sustainability!** Choose materials that are resistant to adverse weather conditions and to the children's enthusiastic use of them: wood, very sturdy cardboard, plexiglass, etc.
- Think **health!** Avoid toxic materials. Ensure that any materials destined for indoor use can be **cleaned**, disinfected or quarantined.
- **Infants and toddlers** adore loose parts and open-ended materials as well, but be mindful of choking hazards (small pieces or substances that crumble easily).
- When the educators/HECPs assume the role of stage manager and fellow player, they should help facilitate the process of the children becoming familiar with these new materials.

Good to know!

HOORAY FOR NATURAL AND RECYCLED LOOSE PARTS AND OPEN-ENDED MATERIALS!



Examples of natural or recycled loose parts and open-ended materials:

- Bark and wood chips
- Baskets, pots, buckets, and other containers
- Buttons
- Bricks
- Cardboard and paper
- Chains
- Clay or loam
- Cloths, scarves, and tarps
- Crayons, paint brushes, etc.
- Funnels
- Gravel, stones, rocks, pebbles
- Hay bales
- Iron wire
- Leaves
- Nets or wire mesh
- Nuts and bolts
- Paint-stirring sticks
- Plastic bottle caps
- Reels of all sizes
- Rings
- Reels of all sizes
- Rollers, pipes, and tubing of all sizes
- Sand, soil
- Seeds, pods, acorns, pinecones of all sizes
- Shells
- Skins and furs
- String and ribbons
- Tools
- Trays
- Tile, wallpaper, carpet samples, etc.
- Tires
- Water: pumps, gutters, watering cans, etc.
- Wood: different-sized branches, blocks, and planks; driftwood
- Wooden, metal, and cardboard boxes
- Wool, cotton



Further information

[Jouer avec fil de fer](#), Blog *Promouvoir le jeu libre au Québec*

Blogue du CPE Joli-Coeur, especially these two videos:

- [Par où commencer?](#)
- [Pourquoi ?](#)

Questions to ask yourself

- What types of materials are currently most prevalent at your ECS?
- How can you transition towards loose parts and open-ended materials?
- Which stakeholders could collaborate with you in this transition?

CHOICE AND LAYOUT OF THE BASE CAMP



The base camp is a transition zone into the natural world. It is a home port and ground zero from where the children depart to play and explore, but where they return for their basic needs.

In an environment that is constantly changing, the base camp makes it possible to create assembly and reassurance rituals.”



General recommendations (may vary with the seasons)

Base camp layout

- Mostly flat and openspace. Avoid humid and flood-prone areas
- Trees to make it easier to install a shelter or tarp
- A walkable path enabling the children to reach the location and with a buggy
- An area that offers protection, privacy, and a pleasant acoustic environment
- Play possibilities around the base camp location: branches, rocks, slopes, trees for climbing, etc.
- Environmental issues: endangered plants, nesting zones, risk of trampling, etc.
- Arrange a corner that is sheltered from adverse weather conditions: permanent tarp or preinstalled stakes or pegs, teepee, gazebo, etc.
- Set up dedicated zones for specific uses: tools, hygiene, rest, reading, storage (for hanging up knapsacks, storing the buggy, etc.)
- Adapt to the seasons. In summer, choose a location that is far from ponds, or add mosquito netting. In winter, choose a location near the natural site's entrance and construct a shelter using snow and branches

Base camp layout

- Keep it simple, in harmony with the natural environment
- Set up a gathering place with seating made of natural materials: tree trunks, logs, pieces of wood, etc.
- Ask the children to personalize the base camp with natural elements
- Every session, inspect the base camp location and rectify any potentially hazardous situations (faeces, animal carcasses, syringes, broken glass, etc.)

CHOICE AND LAYOUT OF THE BASE CAMP



Good to know!

- Gathering at base camp makes it possible to begin the session with a routine (song, listening to the forest, etc.), remind students of instructions and share special announcements for the day
- The first sessions serve to help children adapt to the natural environment by staying at or near the base camp. Thereafter, base camp becomes the initial gathering area from where groups set out to play and explore
- There are two options: Designate a permanent base camp and accept that ground in and around it will get trampled; or move the base camp around frequently to allow for the regeneration of vegetation
- The base camp is a suitable location for holding meetings with staff and parents



Further information

Technique for [installing a tarp](#), Parks Canada video

[The 7 principles of Leave-no-trace](#)

Information sheet [Trouver une seringue usagée](#), Santé et Services sociaux du Québec

Questions to ask yourself

- Did you assess and consider the risks and benefits associated with the location (nearby waterway, elevations, etc.)?
- Is the location accessible by emergency services in the event of an evacuation?
- How can you look after the base camp's natural environment
 - Together with the children?
 - In collaboration with the other users of the site?
 - Together with local organizations?
- Who could help with the base camp's layout: the children, parents, community?

NO SUCH THING AS POOR WEATHER—ONLY POOR CHOICE OF CLOTHING!



When appropriately dressed for the outdoors, children and adults will be more comfortable and will be more likely to want the fun to continue. Adults should take charge of infants' and toddlers' temperature control, but the young children may also learn to recognize their internal signals and become.



General recommendations

The three-layer system for keeping the body dry and warm by adjusting to the conditions and the energy spent:

- 1) The layer closest to the body: **soft, well-fitted and breathable**. Soft wool; polyester and nylon allow sweat to be expelled. Be mindful of cotton, which takes a long time to dry and loses its insulating properties when wet.
 - 2) The middle layer: **insulation, warmth, and breathability**. A woollen sweater or a polar fleece (or down) jacket conserves the body's warmth.
 - 3) The final layer or shell: protection against wear and tear and adverse weather.
- Ideally **waterproof and resistant**: the preferred materials are nylon, polyurethane, or a waterproof but breathable membrane.
 - Attention: If the shell doesn't allow the sweat to be expelled, the other layers can become damp when children are active, which may produce a cooling effect. You will need to open the garment or remove a layer, as needed.

Choosing a waterproof shell

- Rubber bands or other system can be used to keep the sleeves in place at the wrist and ankle areas. Pant sleeves should be worn over the boot.

- Two-piece" models are more versatile; however overalls may be more useful when playing in water holes or on top of snowsuits in spring.
- Choose a larger size to allow for layers. In winter, during extreme cold or when damp, the shell may be worn on top of snowsuits.

Protecting the extremities

- **Hands**: small light mittens with waterproof mittens worn on top. The children can remove their waterproof-mittens for fine manipulations, such as during meals. Mittens are much better than gloves at preserving warmth.
- **Feet**: thermal socks or two pairs of socks and warm, waterproof (only the base, in winter) boots. Choose boots that are large enough to allow for the toes' freedom of movement, even with two pairs of socks.
- **Head**: a neck-warmer or balaclava and an attachable tuque adapted for varying weather conditions.
- Be mindful of **frostbite**. To assess infants' and toddlers' comfort, touch their cheeks, hands, and even their feet, making sure they remain warm.

NO SUCH THING AS POOR WEATHER—ONLY POOR CHOICE OF CLOTHING!



Good to know!

- By asking them questions, the educators/HECPs can help children recognize their own body signals and find solutions suitable to their needs of the moment, for example moving more, taking off or adding a layer of clothing, etc.
- The ECS must plan a system for hanging and air-drying clothing. Dryers can damage the waterproofing of certain materials.
- In warm weather, pale-coloured, long and light clothing is recommended to protect against sunburn and insect bites. Pant legs tucked into socks, closed footwear, and hats are recommended.



Questions to ask yourself

- How can the ECS share the responsibility for clothing with the families, while taking financial restrictions into account?
 - Sharing tips and exchanging clothing between families
 - Clothing items loaned out by the ECS (i.e., a clothing lending library)
 - Group purchasing offers, etc.

Further information

[Les poupons en hiver](#), Naître et grandir
[L'engelure](#), Naître et grandir



START-UP EQUIPMENT



Regularly spending time in a natural environment with children calls for some key pieces of equipment. This ensures everyone's comfort and safety, while making it possible to extend the duration of the sessions and expand the diversity of the experiences.



General recommendations

Educator's/HECP's backpack (choose an adjustable model and avoid overloading it):

- Complete first-aid kit in good condition, including emergency telephone numbers, an epinephrine auto-injector (the child prescription) and other medications. In extreme cold or heatwave conditions, put them inside insulating containers
- List of the children in attendance (or key rings, etc.)
- List of parents' names and phone numbers
- Fully-charged telephone or walkie-talkie
- Bags for collecting garbage
- An extra bib/jersey in case a child arrives late
- Notebook and pencil for noting down observations and comments.

The educator/HECP must also have an easily accessible emergency whistle on hand.

Basic needs equipment:

- Water jug and individual glasses or water bottles
- Regular snack (and lunch, if relevant) with accessories and small tablecloth for serving
- Extra snacks

- Several sets of extra clothing
- Small tarp and flexible hooks for the toilet area
- Portable camping toilet and large sturdy bags or other kinds of bags
- Spray bottles: one filled with water and the other with soapy water
- Dry facecloths, Kleenex, rubber gloves and hydro-alcoholic solution

Setting up a shelter or sitting on the ground, especially when eating a meal:

- A large, light-weight, sturdy, and waterproof tarp for a shelter
- Parachute cords and string
- Rock-climbing snap hooks
- A sheathed fixed-blade knife
- A medium-sized, sturdy, and waterproof tarp for the ground. A large Tyvek rectangle, as used in construction, is fine

A backpack (or bag) for every child [optional]:

- Water bottle, change of clothes, and small mat for sitting on the ground; attached snap hook

START-UP EQUIPMENT



Equipment transportation:

- Choosing the right kind of wagon/sleigh is important. The handle must allow for a solid grip. Avoid overloading it. The heavier the wagon/sleigh, the more difficult it will be to pull. To ensure good visibility of any obstacles, you should look straight ahead while moving forward. The children can help pull or push it.
- **Traveling on foot in winter:**
 - A sturdy, long, and deep sleigh, if possible one that can be pushed. Otherwise, it should be pulled with a cord wrapped in foam backing that is long enough to tie around your waist, so you can use your whole body to pull the load.
 - Place an insulation mat and warm blanket inside the sleigh in case a child falls ill.
- **Traveling on foot in spring, summer, and fall:**
 - Sturdy, all-terrain wagon, ideally one that can be pushed
 - Sign attached to the wagon, showing the ECS'S name
 - Snap-hooks for securing the contents to the wagon's sides
- **Traveling by public bus:**
 - Expedition backpack making it possible to evenly distribute the weight (i.e., one that has a frame, straps, harnesses, belts, etc.)



Good to know!

- The only necessary start-up equipment are the items connected to safety and basic needs.
- simple equipment may potentially be added to support the children's initiatives:
- containers, mortars, notebooks, etc.
- To avoid mould, all equipment must dry completely between sessions
- Some sites may have room to store equipment
- The equipment may be considered educational materials for accounting purposes

Questions to ask yourself

- How can you ensure the educators'/ HECPS' health and safety while they transport the equipment?
- Each site is unique. How should your equipment be adapted to the site's special characteristics (accessibility, surfaces, uneven terrain, etc.)?
- Among the families or other actors in your community, are there any potential allies to help build your start-up equipment?

Further information

OHS issues when using a [sleigh](#) and other movements in winter

EATING OUTDOORS



Eating a snack or lunch in an outdoor play space, the park, or in a natural setting...what a delight! Meals outdoors offer a congenial and inviting context, while also making it possible to spend more time outdoors. Engaging all its stakeholders, every ECS must find solutions adapted to their context.



General recommendations

• Optimal food services organization

- Determine the conditions for activities outside and revise your menu choices and meal preparation steps accordingly: time of departure and return, meal location, means of transportation, number of groups and children, etc.
- Review the existing menu. Assess whether the scheduled meals can be readily transported and served outdoors so you can avoid changing everything around. If required, switch around menus for specific days
- Prioritize foods that can be easily served and eaten
- Respect health and hygiene requirements, especially hot food safety standards and cold chain hygiene standards¹.

• A nutritional menu

- A variety of different dishes with good nutritional quality are of crucial importance! Please refer to guidelines 4 to 7 in *Gazelle et Potiron* (see below)
- To ensure that commercial snacks are a viable option, select items that are aligned with the AQCPE'S nutritional fact sheets²

• Choosing equipment and tableware with due consideration for...

- The menu: presence of liquids, hot or cold meals, number of different foods, etc. A cooler and light-weight insulating containers are essential
- The number of children, the travel distances, and the frequency of activities outside
- Occupational health and safety issues associated with equipment handling and transportation
- Available storage space
- Handling requirements associated with meal services and eating

• Optimal educational practices

- Be attentive to children's signals indicating hunger and satiation
- Introduce the meals with enthusiasm
- Make sure everyone is comfortable (seated on a tarp or tree trunk, at a picnic table, etc.)
- Set up a warm and welcoming atmosphere: closeness, conversations, mutual help, etc.

¹ <https://www.mapaq.gouv.qc.ca/fr/Restauration/Qualitedesaliments/securitealiments/inspection/methodeinspection/Pages/Temperature.aspx>

² <https://www.aqcpe.com/nos-services/saine-alimentation/la-gestion-de-la-cuisine-au-cpe-quest-ce-que-cela-implique/>

EATING OUTDOORS



Good to know!

- Light tableware and utensils are often preferred by ECSs, such as small bottles made of silicone for stewed fruit
- Cups are useful for easy handling of liquids (including soups)
- By gradually adopting outdoor eating, ECSs should take into account their specific context and tackle any challenges one at a time
- Concerning transportation, the use of a wagon/sleigh that can be pushed is preferable, as the required effort and risk of injury are diminished (consult the sheet on equipment)

Further information

[*Gazelle et Potiron*, Ministère de la Famille](#)

[Le programme CPE Durable d'Environnement jeunesse](#)

[Canada's Food Guide](#)

[Principes de déplacement des équipements, AQCE](#)

Questions to ask yourself

- How can you ensure high-quality interactions during meals outdoors?
- How can you make eco-friendly choices with regard to eating outdoors? Think of local producers, reusable containers, waste management, etc.

HYGIENE IN NATURAL ENVIRONMENTS



Often considered an impossible task in the initial implementation stages, hygiene in natural environments can become manageable by following just a few simple tips and tricks.

Taking care of these needs in the field reduces the urgent need to return to the ECS, thereby extending the sessions in nature.



General recommendations

Toilets

Si le site fréquenté n'offre pas d'accès à des installations sanitaires, d'autres options sont envisageables :

- A “potty” in nature:
A camping toilet or a bucket lined with a sturdy plastic bag (to be disposed upon return) and topped with a small toilet seat
- In case of an emergency, urinate directly in the natural environment:
 - Observe the principles of Leave No Trace by respecting a certain distance from any waterways, paths, and campsites
 - For enhanced comfort, place a small toilet seat over two horizontal logs
 - Offer a splash-free stand-to-pee device for girls/women
 - Bring along a carrier bag and disinfectant so it can be cleaned between uses.
- A tarp and flexible hooks for creating a private area



- Ensure you have the required equipment and supplies for washing hands

At first, some of the children may be reluctant to use a potty in a natural environment. By being sensitive to the situation and supportive, educators/HECPs may gain insight on how to facilitate the children’s learning and comfort in this matter.

Changing diapers

- If there are no sanitary facilities and the child is robust and steady on their feet, it is recommended they be changed in a standing position, even if they have had a bowel movement. The priorities here must be the child’s well-being, as well as the educator’s/HECP’s health and safety:
 - Place one knee on the ground so you are at the same height as the child as well as stable. A mat can be placed on the ground for your comfort
 - Make sure the child is positioned in front of you
 - Ask the child to bend forward and place their hands on the ground so you can wipe their bottom clean. Ask the child to stand upright and turn around so you can fasten the new diaper

HYGIENE IN NATURAL ENVIRONMENTS



- Ask the child to participate: for example, undressing and getting dressed
- Position yourself so you can keep an eye on the whole group without having to twist your back
- Ensure you have all the necessary supplies on hand: clean diaper, rubber gloves, wet-wipes, plastic bag for waste, disinfectant, etc.
- Make sure you wash your hands
- In winter, proceed quickly, and, if needed, cover the child's upper body

Washing your hands

- Bring along two spray bottles: one containing soapy water, and one containing clear water; or install a hand-washing station using a canvas water bag
 - In winter, fill the spray bottles with warm water and place them inside an insulating bag or on your body under your coat
- To dry your hands, use individual facecloths, or brown paper, which you can put in the composter upon your return
- Hydro-alcoholic solution is rarely recommended for children. Moreover, if hands are dirty, they need to be washed first

¹ See <https://www.sanstrace.ca/principe-gestion-des-dechets>

Further information

[Changing diapers: how to help them without injuring yourself](#), AQCPE

[Changing diapers](#), Ministère de la Famille



Good to know!

- The body tends to self-regulate during activities. In the case of sessions outside lasting approximately one to two hours, going to the toilet prior to heading out will mostly prevent any sudden toilet urges during the session
- If lunch or nap time takes place in the natural environment, the urge to go will most likely occur. Make sure you are prepared!

Questions to ask yourself

- How do you approach this subject with parents? How do you handle their concerns?
- How can you set up an area around the base camp that addresses the children's hygiene needs?

OUTDOOR REST AND RELAXATION



Relaxing in the shade of trees, feeling a soft breeze on one's face... Restful moments outside are a source of well-being. They also make it possible to extend the time spent outdoors, while respecting everyone's individual pace.



General recommendations

- The principles that guide the practices are the same, whether the nap takes place indoors or outdoors. For example, personal effects are stored in individual bags, any facilitation measures are sensitive in nature, and there is constant oversight, etc.
- In winter, you need to make sure that the children's clothing is warm, dry, and roomy. Furthermore, good sleeping bags make it possible to maintain an adequate temperature. Hats, neck-warmers, mittens, and snow boots are essential. Extreme cold is unsuitable for sleeping outdoors
- In summer, protect the children from the sun, intense heat, and insects by choosing a well-ventilated, shaded area and mosquito netting
- Children aged 18 months or more:
 - Floor mats are suitable in warm weather conditions. In winter, stackable camping beds offer better protection against the cold ground

In outdoor play spaces

- Various locations are well suited for napping or improvised relaxation:
 - A covered platform
 - A shady lawn area
 - A safe space with a few hammocks (for relaxing only)

In natural environments

- A permanent or temporary shelter may be set up
- Sleeping surfaces must be flat, firm, comfortable, and clean. For example, a single bedsheet on a carpet of leaves
- Spontaneous relaxation situations may be suggested, as needed, involving hammocks, etc.

Three locations may be considered for taking a rest outdoors:

On a patio adjacent to the ECS's indoor facilities

- The children can sleep there in all seasons, as provided there is a roof and walls
- Infants:
 - In keeping with statutory requirements, allow for one cot per child in addition to the cots available inside the nursery

OUTDOOR REST AND RELAXATION



Good to know!

- The implementation of outdoor rest/napping practices should be done gradually: begin with locations adjacent to the ECS, choose milder weather conditions, etc.
- Winter brings about fear for some families. By agreeing to a gradual approach, the ECS can help families become accustomed to Nordic conditions and how to handle the cold.
- Hammocks cannot serve as a location where the children regularly sleep. They can, however, be used on an occasional basis as a location for relaxing—if they are installed safely (i.e., with stakes, not too high above group, above soft surfaces etc.).



Questions to ask yourself

- What are the advantages and challenges of napping/relaxing in the open air, especially as it relates to occupational health and safety (well-being, transport of equipment, etc.)?
- How can you respect every child's pace and rest/napping needs outdoors?

Further information

The practice of sleeping outdoors in childcare facilities



USING TOOLS IN NATURAL ENVIRONMENTS



The use of tools lets children discover the properties of materials and make technical hand motions their own. By learning how to handle each tool and protect themselves, the children become independent, skilled, and confident.

Tools aren't toys. Nevertheless, once they have mastered the basic techniques, using tools gives children the opportunity to enrich their projects: constructing a raft, installing a tarp, etc.



General recommendations

- Place the tools in a locked box or bag. The adult takes charge of handing any required tools to the children
- Make sure that all the tools are put away again after each session (laminated list of contents attached to the toolbox or tool bag)
- Use a cord laid down on the ground, a canvas sheet, logs, or traffic cones to stake out and designate a zone for exploring the tools. Once the technique has been mastered, the tools may be used outside the designated zone for a specific project
- Ensure constant supervision, particularly while the children are still learning the technique for using a tool
- Teach the children not to walk around while using a tool. Given few exceptions, the children should remain seated or kneeling while handling tools
- Make sure the use of tools occurs with due respect to all living creatures
- Where relevant, make sure the safety mechanism is engaged when the tool is not in use
- Offer gloves and protective eyewear, as needed
- Clean and dry the tools after every session. Check if they are in good working condition
- Regularly carry out a risk/benefit assessment of activities involving the use of tools
- Hold off on introducing tools until young and old alike have grown familiar with the natural environment and emergent curriculum. Begin with tools that are easy to handle, such as peelers, trowels, mallets, etc.
- It is preferable to choose genuine, quality tools that are in good working condition
- See if a parent volunteer (or individual from the community) is interested in introducing the basic techniques to the children

Good to know!

USING TOOLS IN NATURAL ENVIRONMENTS



Examples of tools that may be used in natural environments

- Peeler
- Snap hooks/ carabiners
- Trowel and spade
- Hammer
- Mallet
- File
- Locking pliers
- Tape measure
- Cord
- Chisel and shears
- Carpenter's brace
- Bow saw
- Chest saw
- Fixed-blade knife

Basic technique: Peeler

- Introduce the peeler to the children: its handle, blade, what it can be used for, etc.
- Show them that we sit down when handling a peeler
- Explain how we hold the peeler in our dominant hand and the tip of a branch in the other hand. The opposite end of the branch is placed on the ground
- Show how to place the peeler's blade on the branch and exert pressure near the hand holding the branch. We slide the peeler along the branch, away from the hand. Then we lift the peeler up and bring it back to the starting point, where we repeat the same process



Questions à se poser

- How do we support children regarding risk management while using tools?
- How do we engage parents in a dialogue about their children's experiences with these tools?

Further information

The following table lists the basic techniques and additional tips associated with a number of different tools: [Wood Craft Skills Training Resource: Safe use and storage of tools](#)



Templates and procedures

Many of the templates that follow were developed in collaboration with the CPEs that were part of the *Alex—Éducation par la nature* project. These templates can be used as a basis for developing your own tools and guidelines.

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1. Implementing nature-based education: model action plan

Overall goal—priority: _____

SPECIFIC GOALS (realistic, attainable, measurable)	MEANS for attaining your goal	EXPECTED OUTCOMES (observable, measurable)	RESOURCES (human, material, financial, etc.)	DEADLINE (target dates)

2. Nature-based education implementation timeline

The following is an example of a nature-based implementation timeline. Note that the steps, frequency, and duration may be changed, and/or additional details may be added. The timeline can be adjusted in accordance with your goals, resources, and realities.

STEPS	AUG	SEP	OCT	NOV	DEC	JAN	FÉB	MAR	APR	MAY	JUN	JUL	...
Management team/committee meeting	●	●		●		●			●		●		
Board meetings	●			●		●				●		●	
Education team meeting		●		●		●			●		●		
Mobilization (ED, Board, team, parents)	●												●
Knowledge transfer	●												●
Staff and HCEP guidance and support	●												●
Observation/analysis: complete self-analysis		●											
Goals and priorities		●											
Planning			●	●									
Action plan													
Implementation-Experimentation-Initial outings				●					●				
Follow-up procedures/adjustments									●				
Evaluation												●	
Long-term viability of changes													●
Structuring measures (updates or additions)													●

3. Evaluation of the nature-based education implementation process

Reflection exercise

Name of ECS: _____

Start date of the implementation process: _____

Today's date: _____

Evaluation goals:

- Review the nature-based education implementation process
- Showcase achievements and stakeholders
- Determine the best way forward for pursuing the process

1. Name the **achievements** you are proud of in connection with the implementation of nature-based education in your ECS.

2. You had goals and expectations at the time you first initiated the implementation process. As of today's date, to what extent would you say the **anticipated benefits have materialized?**

3. Perhaps you have also observed **benefits or other effects that you weren't expecting at the outset. If yes, what are they?** They may include benefits or impacts affecting the children, your team dynamic, your planning strategies, your interactions with the children and/or families, etc.

4. **What challenges** did you encounter during the process? **How did you overcome them?**

5. What are the **key conditions** that helped with the implementation of nature-based education in your ECS?

6. What can you do to ensure the nature-based education project may be sustained over time?

Congratulations on your dedication and commitment!

4. Problem-based learning

What is the point of problem-based learning?

It helps you develop your capacity for independent learning; working as a team; as well as your analytical and thinking skills, while also allowing you to learn more about a specific topic. And last but not least, it helps you resolve an actual problem!

How does it work?

Step 1: Choose a complex problem

A complex problem cannot be addressed with a one-size-fits-all solution. It may involve missing, vague, or contradictory information. To resolve a complex problem, you need to consider and analyze the problem from various angles.

ExAmpLe:

- Can we allow young children to play in a creek?

Step 2: Explore the problem as a group

- What are the words or **key concepts** associated with the problem? If necessary, clarify their definition
- What **do we already know** in connection with this problem?
- What **hypothetical** solutions do we have at our disposal? Name a few
- **What do we need** in terms of knowledge, reading, discussion time, surveys, observations, etc. to explore these hypothetical solutions?
- What are the different **angles** from which this problem may be approached? (Examples: the children's and families' needs, organizational aspects, resources, regulations, values, impact on the team and on the children and families, etc.)
- **Who** will work with whom/**on what**? (Assignment of the tasks to individuals or to sub-groups)
- What is the **deadline**?

Step 3: Everyone works on their assigned tasks associated with the main hypotheses

- Research, reading, observations, surveys, structuring measures, etc.
- Selection and organization of the relevant information to be reported to the group at the next meeting

Step 4: As a group, assess the findings and choose a solution

- **Enhanced understanding** of the problem
 - What is the main information, what are the main findings? (Everyone takes turns presenting their findings and fielding questions)
- **Analysis** of the possible solutions
 - Why choose a particular solution over another one (the pros and cons)?
 - Are we missing any information before we can finalize our choice? (If yes, go back to Step 3!)

To help make the choice easier, take a critical look at all the observations, arguments, and information.

- **Summing up:** clear presentation of your choice, along with supporting reasons, and the different analytical angles retained

Step 5: Carry out an evaluation of the process

The approach, individual/collective strategies, the construction of a common understanding, etc. *What did we learn from this process?*

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5. The adults' role in nature-based education

Adults take on various guiding roles with regard to children's play and spontaneous explorations. In addition to a warm and inviting presence, the educators/HECPs wear several hats in their role: **caring observer, co-player or co-explorer, stage manager, or play-exploration leader.**

WHERE DO I POSITION MYSELF IN MY ROLE? CAN I FURTHER ENRICH MY STANDPOINT SO I CAN MORE EFFECTIVELY SUPPORT THE CHILDREN?

CARING OBSERVER

- I position myself near the children
- I allow the children to independently initiate and direct their play or explorations
- I pay attention to the children's action, interests, and interactions
- I take notes, photographs, and videos so I can maintain a record of my observations I remain available to respond to any need that may come up

Further reflections

STAGE MANAGER

- In addition to preparing the site, I support the preparations and implementation of play.
- I initiate situations to stimulate curiosity and interest.
- I make suggestions based on the children's ideas and interests
- I add elements to enrich the play
- I protect the space around playing children by removing any hazardous materials
- I protect play situations and sites so children can continue to pursue them
- I leave the direction of any play situation up to the children

Further reflections

This form was developed in collaboration with CPE Joli-Cœur, based on the continuum of the adults' roles in play situations, Lemay, L., Bouchard, C., & Landry, S. (2019). *Jouer, apprendre et se développer. Le développement global de l'enfant de 0 à 6 ans en contextes éducatifs.* PUQ

CO-PLAYER OR CO-EXPLORER

- I play or explore close to the children, either side by side or in collaboration with them
I imitate the children's actions and words, I use the same materials
- I can offer variations on the children's actions by paying attention to what they do in return
- I assume a secondary role, leaving the children in control of their play I propose new elements in a play situation when it is losing steam

Further reflections



PLAY-EXPLORATION LEADER (ESPECIALLY WHEN THE CHILDREN ARE LESS EXPERIENCED)

- I more actively involve myself in the children's play or explorations
- I stimulate the children's ideas to fuel their play or explorations
- I encourage the children to think within their play or explorations
- I provide more advanced models of thought, behaviour, and language
- I gradually withdraw my support, which is meant to be one-off support

Further reflections

6. Checklist: activities in the natural environment

Activities in the natural environment

- Did I advise the coordinator that I am going out, on the group I am going out with, the time of departure, the place I am going to, the cell phone number to call in case of an emergency? (Verbally and in written form on record)

- Did I check the contents of my backpack?
 - Written list of the children in attendance (or the key rings)
 - Complete first-aid kit
 - Handkerchiefs/tissues and rubber gloves
 - Disinfectant and soap for cleaning hands
 - Bag for collecting garbage
 - Set of clothes from the childcare centre (sweater, shorts, underwear)
 - An extra bib/jersey in case a child arrives late
 - A whistle

- Do I have my cell phone (is it fully charged) or a portable radio?

- Do I have a water jug, glasses, and the children's water bottles?

- Do I have the children's snack, or at least an emergency snack?

- Do I have my tablet and a pencil to jot down my observations?

- Are the bibs/jerseys of all the children in my group identified with the ECS's name?

Happy Adventuring!

This checklist was developed in collaboration with the CPEs/COs that took part in the *Alex – Éducation par la nature* project

7. Parental consent to the nature-based education project

(Insert name of ECS:) _____ has adopted nature-based education as one of its main tenets. This approach is based on eight principles:

- A different approach to time: slowly; often; regularly; for long periods
- Engagement with an environment rich in biodiversity, loose parts, and open-ended materials
- Emergent curriculum centred on exploration and play: recognizing children’s diverse skills as well as whole-child development
- High-quality educational interactions: enhancing the children’s experience
- A close partnership with parents: acknowledging, discussing, sharing power, valuing diversity, and networking
- Close collaborations with the community: placing children at the heart of a community project

In more concrete terms, nature-based education is expressed through various practices in different living environments throughout the day: the ECS’s indoor and outdoors facilities, the surrounding recreational areas, and the natural environment. The activities, which can be adapted to different groups of children, are subject to pedagogical benchmarks and safety standards.

With regard to play periods in the natural environment, **the educators/HECPs remain fully responsible for the children.** The ECS provides guidance and support to its staff to make sure the nature-based education practices adopted are professional and consistent.

As the saying goes, “there is no such thing as poor weather, only poor choice of clothing!” To ensure that all children can benefit from outings in nature in all weather conditions (except in extreme conditions), parents must **make sure that their children wear clothing that is appropriate to various situations.** That includes an appropriate change of clothing. Support is available for anyone who may need it.

I, the undersigned, _____
(name of the parent or guardian) hereby acknowledge that I have the authority to represent _____ (name of the child or children).

I agree that my child can participate in the nature-based education project. I understand that s/he will have the opportunity for various experiences in the natural environment, some of which may involve challenges. To be able to safely approach and overcome these challenges, s/he will receive the appropriate facilitation and support from her/his educator/HECP or other approved adults assisting them.

Signed in _____, on _____ 20_____

Signature of parent or representative: _____

8. Guidelines for parent chaperones in the natural environment

- How do you support children in an emergent curriculum context? Key to this is slowing down the pace and making yourself available for the children, as needed!
- Observe the children: What are they doing? What are they saying? What are they looking for?
- Decide on an appropriate moment to approach a child. For example:
 - Describe to the child what you have observed: “I can see you are trying to tie a knot”
 - Ask the children questions so they can explain what they are doing: “What do you want to do with those rocks?”, “How did you manage to move that branch?”
 - Participate in the children’s play, add an element to give it new momentum.
- How do you facilitate acceptable risk-taking?
 - Observe a child dealing with a challenge. Approach the child, if necessary
 - Make sure there aren’t any hazards, such as rocks below the tree the child is climbing— Ask the child to assist you in scanning the environment.
 - Pose questions to the child: “What can you do in order to...? “, “Have you ever seen someone who ...?”, “What will happen if...?”
 - Avoid directly helping the child. Let them analyze and experiment by themselves, while you remain nearby
 - Trust the child and their abilities

Pedagogical documentation

During the sessions in the forest, the educators/HECPs should be attentive and sensitive to the children’s experiences. They may wish to also take photos or videos, write down their observations and what they hear. You will possibly see the educators/HECPs carry out this work. They are preparing the pedagogical documentation that you will receive!

Pedagogical documentation makes the children’s learning visible. This is how educators/HECPs attempt to illustrate the children’s actions, reflections, assessments, and reasoning.

Don’t forget: adapted, comfortable clothing is important to help make the most of the outings in the forest!

This information sheet developed in collaboration with CPEs-COs Joli-Cœur and Passe-Partout, Alex – Éducation par la nature project

9. Choosing a new site/location—initial assessment

(Name and location):	
CRITERIA	COMMENTS
<p>Distance and travel specifications Distance to the natural site and travel times? Means of transportation (on foot, by bus, etc.)? Difficulties en route (bicycle paths, road crossings, railways, ditches, sloping terrain, etc.)?</p>	
<p>Accessibility Is the site accessible? Who is the owner or manager? Is there opportunity to build a foundation for collaboration based on an agreement to access and use the site?</p>	
<p>Use of the site Other users of the site (skiers, snowmobilers, cyclists, hunters, bird watchers, etc.)?</p>	
<p>Biodiversity and habitats/ Fragility of the ecosystems What biodiversity (flora/fauna) and habitats can be found there? Are there any conservation issues? Can spending time with the children on the site disturb the habitats or species?</p>	
<p>Terrain and surface variations, and loose parts and open-ended materials How does the terrain vary? (E.g., ravines, slopes, open spaces, etc.) Is it extensive enough for active play? Are there plenty of loose parts and open-ended materials: e.g., branches, rocks, sand?</p>	
<p>Sound quality Are the acoustics of the environment affected by such factors as: nearby traffic routes, industrial facilities, high-voltage lines, etc.?</p>	
<p>Base camp Are there suitable locations for a base camp? Do they offer protection from rain and intense sunshine? Is it possible to set up a shelter, tarp, etc.?</p>	

10. Seasonal or periodic assessment of the natural site

Site name and location:

Map/drawings of the site (pinpoint any changes in the environment that may incur new risks):

RISK-BENEFIT ASSESSMENT

- Types of incidents that may occur (e.g., falls, collisions, losing something, etc.) and potential consequences for the children

- What is the probability of such incidents occurring and how severe are they likely to be? (red, yellow, orange, green)

- What are the potential benefits arising from these situations? (improved confidence, resilience, motor skills, problem solving, etc.)

CRITERIA	COMMENTS
If visual markers (signposts) are in place to delineate the play area, is it necessary to make any adjustments or carry out repairs?	
Does the condition of some trees necessitate that they be cut down? Do some branches represent a hazard and need to be cut off? Consider consulting a certified arborist.	
Have new species of plants/mushrooms appeared? If yes, is there someone who can help you identify them and find out whether they are poisonous or hazardous in other ways.	
Is the base camp still operational and safe? Are any improvements necessary (pieces of wood for seating, the shelter, etc.)?	
Is it necessary to close off certain areas for a specified period, for example, during the spring flooding of a creek, or during nesting period?	
Is the availability of loose parts and open-ended materials still plentiful (branches, rocks, soil, fallen leaves, etc.)?	
<p>SITE ANALYSIS IN ACCORDANCE WITH CRITERIA AND RECOMMENDATIONS</p> <p>Decisions</p> <ul style="list-style-type: none"> ● Areas to be excluded ● Mitigation measures ● Accessible areas (no major issues) 	<p>Follow-up (What? Who? When?)</p> <p>Carried out by: _____</p> <p>Date : _____</p>
<p>This form was developed in collaboration with CPE Joli-Cœur, Alex – <i>Éducation par la nature</i> project</p>	

11. Record of daily inspections of the natural site

Week from	to	202__	Monday		Tuesday		Wednesday		Thursday		Friday	
			yes	no	yes	no	yes	no	yes	no	yes	no
Condition of the terrain and the environment												
Environment Are there any foreign objects (debris, waste) or signs of vandalism in the play environment?												
Facilities Are the facilities damaged (canvas, base camp/meeting area, etc.)?												
Signposts (if any) Are the signposts delineating the terrain damaged, or have any disappeared?												
Trees Do any of the trees or branches constitute a hazard? Should any areas be declared off-limits?												
Animals Are there any animal faeces or dead animals?												
Plants and mushrooms Are there any potentially hazardous new plants (mushrooms, stinging plants, poisonous plants, etc.)?												
Other factors that may involve major risks?												
Comments												

This form was developed in collaboration with CPE Joli-Cœur, Alex – Éducation par la nature project

12. Procedures for outings in the natural environment and Emergency planning

To ensure children's safety and well-being during outings in the forest, it is important to respect the procedures listed below:

- The minimum number of groups for an outing in the natural environment is two. However, if an educator/HECP is accompanied by another staff member (specialized educator, etc.), the outing can go ahead with just a single group
- An occasional substitute educator is not authorized to take charge of a group in the natural environment, unless the management has given special permission
- To ensure effective supervision, the maximum number of groups in a single area of the natural environment is two. Natural environments call for heightened vigilance
- Before or at the beginning of every outing in the natural environment, the educators/HECPs should take the time to outline safety instructions and roaming limits for the children
- The educators/HECPs should carry a whistle on their person, or else agree with the children on a sound signal to indicate when they should stop their activities and regroup
- The educators/HECPs are required to have a communication device (cell phone)
- The educator/HECPs must carry on their person photo ID cards or other means of identification of the children in their group in attendance that day
- One of the educators/HECPs should carry a designated backpack for outings, containing all essential items required, including a first-aid kit
- All children should wear a bib/jersey featuring the name of the ECS
- Before leaving the ECS, the educators/HECPs should record the name(s) of the group(s), the location and journey, the departure time and scheduled return time, as well as the cell phone number used
- All activities beyond the ECS's outdoor facilities should proceed with caution, with due regard for the specifics of the environment (e.g., age of the children, road traffic, etc.)
- In the natural environment, the educators/HECPs should identify the limits of the area that the children may explore, and position themselves so that they can clearly see all the children
- The management must check with relevant authorities in advance to make sure that in the event of a serious incident, the natural site's location may be accessed by emergency medical services

In the event of a serious incident requiring emergency intervention

- Depending on the nature and seriousness of the incident, the educators/HECPs may judge it necessary to first call 911 or alert the ECS to quickly obtain help—for example, if they need an additional person to manage the situation
- In the event a child has been injured, an educator/HECP should stay at their side and provide first aid. The educator/HECP should follow the 911 dispatcher's instructions with regard to first aid treatments, along with any necessary precautions (for example, whether or not it is preferable to move the child)
- The other educator/HECP should supervise the rest of the group and, where relevant, wait for additional help to arrive from the ECS
- When a child needs to be transported by ambulance, the child's educator/HECP, or the most competent person to do so, should accompany the child
- Depending on the situation, the educator/HECP or management should inform the parent of the situation and any measures that will be taken
- Upon returning to the CPE, the educator/HECP should complete an incident report
- At all times, the educator/HECP should make decisions based on the interest of the injured child and the rest of the group. Teamwork is crucial in emergency situations
- When an outing requires travel by bus, different protocols will likely be required
- Management is responsible for making these procedures are known and ensuring adherence to them

This template was developed in collaboration with several ECSs that took part in the *Alex - Éducation par la nature* project

13. Planning for workers' occupational health and safety

OHS CHECKLIST BEFORE EMBARKING ON THE PROJECT

General	YES	NO	Comments/ corrective action	✓
Assessment of the environmental risks completed (self-assessment form concerning risks in the natural environment, available on the AQCPE website)				
Action plan completed according to the risk rankings				
Adapted work policies/procedures formulated—which the workers understand				
Working hours revised to help facilitate preparations and outdoor activities (food service workers, educators, chaperones)				
Provisions for chaperones, if needed, depending on activities and groups				
Training	YES	NO	Comments/ corrective action	✓
All staff present during activities trained and informed of the rules, policies, procedures to be implemented, and the PPE available for the activity				
All staff informed and trained on the topic of identifying, analyzing, mitigating, and controlling any hazards that may occur in the course of the day				
All staff informed about choosing season-appropriate and weather-appropriate clothing (shoes; boots; light-coloured, long clothing; warm clothing, etc.)				
All staff trained and informed on how to ensure their own safety when children take risks				
Security measures in emergencies	YES	NO	Comments/ corrective action	✓
Updated emergency procedures—depending on the location visited—formulated and known to staff				
Communication plan established in the event of an emergency				
Operational, fully charged communication tool available (E.g., functioning network, battery, etc.)				
Emergency transportation available				
Staff trained in first aid present at outings.				
Provisions in place for a OHS first-aid kit				

Equipment	YES	NO	Comments/ corrective action	✓
Adapted equipment for transporting supplies and meals available (trolley, fixed on-site equipment, independent transportation, help, etc.)				
Backpack available that is adapted for supplies being transported				
Walking equipment for winter conditions available upon re-quest (cleats, snowshoes, etc.)				
Sanitary equipment available (on-site sanitary facility, bag-lined pail and seat, outhouse, etc.)				
Hand-washing stations planned-out and available (sanitary facility at the visited location; hand sanitizer; two spray bottles, one filled with soap and water, the other with clean wa-ter; water-filled jerrycan with tap, etc.)				
Flashlights and batteries available, if needed				
A space is available for storing equipment between outings				
Individual health status	YES	NO	Comments/ corrective action	✓
A confidential health status form completed by all staff present during outings. No staff has a health problem that could be triggered or become aggravated in the course of the activity				
No staff has an allergy triggered by the presence of insects, animals, plants, pollen, etc. Any staff who does, has an adrenaline/epinephrine self-injector or any other necessary product on hand to ensure their security and well-being				
Recommendation: staff vaccination records are up to date (tetanus, etc.)				
Form completed by:	Date :			
This form was developed in collaboration with the AQCPE's OHS unit				

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