

## Nature-Based Preschool Professional Practice Guidebook

Teaching, Environments, Safety, Administration







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The Natural Start Alliance is a project of the North American Association for Environmental Education (NAAEE). NAAEE is a non-profit organization dedicated to advancing environmental literacy and civic engagement to create a more equitable and sustainable future for all. The Natural Start Alliance advances early childhood environmental education for all young children.

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## Introduction

Imagine you've just entered a natural outdoor play area with a small group of young children. A squirrel skitters by on a branch. You hear the buzz of a bumblebee before it lands on a flower. A crow caws from its perch overhead as it watches you walk by. The children turn to you with questions about all the action: Where is the squirrel going? What is the bee called? Is it dangerous? What is the crow saying? Your conversation continues for several minutes as you observe the animals' movements together.

Within minutes, the children become actively engaged with their environment. One child lifts up a rock to find out what's under it, while another picks up a stick to find out if it can be snapped easily or might make a good tool. You watch as they investigate, test, and imagine.

There's plenty of room to run and jump and maybe even things to climb, and the children test their balance, stretch to reach a new height, and squeeze into small spots. You encourage them as they move their bodies in big and small ways.

The children might work together to build a fort to hide in, or dig a trench for water to flow through, or make a mud pie for you to pretend to eat. You show them possibilities they hadn't considered when you point out new puddles that have formed, or a small pile of sticks and rocks that someone has brought to the play area.

You notice a child that appears to be ready for a break from the play. She finds a quiet spot under a shrub where she can be alone to watch, or think, or listen to the sound of the breeze through the leaves. You might reflect that you also feel like your time outdoors has provided some mental renewal.

Consider any domain of child development—whether it's cognitive, physical, or socio-emotional—and there is ample evidence that good teaching in natural outdoor environments, from wild areas to green schoolyards to city parks, promotes a child's healthy development, while also connecting children deeply with the places where they live and the natural and human communities of which they are a part.

This *Guidebook* describes how teachers and administrators leverage the powerful benefits of nature to offer all young children the chance to experience a preschool education that allows them to play, learn, grow, and build a foundation for a lifetime of engagement with the world around them.



## Nature in Early Childhood Education

Nature is increasingly being recognized as an important, and often low-cost, tool for fostering children's health and development. Whether it's natural environments, gardens, green schoolyards, outdoor classrooms, or even simply views of nature, research suggests that there are a variety of ways that nature enhances children's health and development, including:

- Enhancing brain development<sup>1</sup>
- Improving academic performance, including helping children produce richer writing and providing foundations for science learning<sup>2</sup>
- Enhancing communication<sup>3</sup>
- Promoting socio-emotional development<sup>4</sup>
- Promoting emotional resilience and self-regulation<sup>5</sup>
- Promoting executive function<sup>6</sup>
- Providing mental health benefits<sup>7</sup>
- Reducing stress<sup>8</sup>
- Reducing symptoms of ADHD<sup>9</sup>
- Providing therapeutic benefits to children with autism<sup>10</sup>
- Promoting physical activity and motor development<sup>11</sup>

At the same time, research also points to the importance of childhood experiences for forging connections to the natural world and promoting the development of environmental literacy. For example, research has revealed that childhood experiences in nature or with environmental education can:

- Promote the development of children's ecological identity<sup>12</sup>
- Foster children's ecological literacy<sup>13</sup>
- Increase children's knowledge of animals<sup>14</sup>
- Be associated with pro-environmental attitudes in adults<sup>15</sup>
- Predict environmental citizenship and a commitment to nature-based activities in adults<sup>16</sup>

Early childhood environmental education aims to maximize the benefits of early experiences in nature to create a foundation for environmental literacy. The North American Association for Environmental Education's *Early Childhood Environmental Education Programs: Guidelines for Excellence* lays out the key characteristics associated with high-quality early childhood environmental education programs (see inset on page 10).

## Nature-Based Early Childhood Education

Recognizing both the benefits of nature to education, and the benefits of education to nature, many early childhood education programs use nature and natural elements to enhance the curriculum and promote environmental stewardship. They might plant a garden or put up a bird feeder, for example, to offer more opportunities for children to experience nature as a part of the program.

A *nature-based* early childhood education program takes an immersive approach, putting nature at the heart of the program. In a nature-based early education program, nature is a setting for the program and an object of study. In addition, the care and protection of nature and the environment are regarded as a key outcome of the program, along with healthy child development. Some describe these nature-based early education programs as learning in nature, about nature, and for nature.

Nature-based early education programs serve young children (typically defined as children from birth to eight years old) and combine elements of both early childhood education (relying on developmentally appropriate practice to promote healthy child development)

and environmental education (working to develop environmental literacy, a sense of place, care and concern for the natural world, and so on).



## Play and Learning in a Nature-Based Preschool

Children's play in natural settings and with natural materials is the basis of a nature-based early childhood curriculum. By definition, children play for their own enjoyment. Play may satisfy children's interests or curiosities, test their abilities, allow them to explore their environment, offer opportunities to engage with friends or teachers, allow them to imitate the activities of adults or the movements of animals, and so on. But, as early childhood educators know, just because play is fun doesn't mean it's not educational. Children's play is a central feature of early childhood education.

As a result, play is emphasized throughout the *Guidebook*. Use of phrases such as "play and learning" or "play and exploration" in the practices is not meant to suggest that play and learning are distinct activities. Rather, both terms are sometimes used together to emphasize that they are tightly connected. Play and exploration are often *how* children learn.

## Summary of Early Childhood Environmental Education Programs: Guidelines for Excellence

## Key Characteristic 1: Program Philosophy, Purpose, and Development

Guideline 1.1—Focus on nature and the environment

Guideline 1.2—Focus on education of young children

Guideline 1.3—Culturally appropriate goals, objectives, and practices

Guideline 1.4—Environmental literacy: board, staff, and providers

Guideline 1.5—Health and safety

Guideline 1.6—Ongoing evaluation and assessment

Guideline 1.7—Partnerships

Guideline 1.8—Interpersonal and intergenerational relationships

## Key Characteristic 2: Developmentally Appropriate Practices

Guideline 2.1—Based on research and theory

Guideline 2.2—Authentic experiences

Guideline 2.3—Child-directed and inquiry-based

Guideline 2.4—The whole child

## Key Characteristic 3: Play and Exploration

Guideline 3.1—Use of the natural world and natural materials

Guideline 3.2—Play and the role of adults

## Key Characteristic 4: Curriculum Framework for Environmental Learning

Guideline 4.1—Social and emotional growth

Guideline 4.2—Curiosity and questioning

Guideline 4.3—Development of environmental understandings

Guideline 4.4—Skills for understanding the environment

Guideline 4.5—A personal sense of responsibility and caring

Guideline 4.6—Physical health and development

## Key Characteristic 5: Places and Spaces

Guideline 5.1—Spaces and places to enhance development

Guideline 5.2—Natural components

Guideline 5.3—Comfortable for both children and adults

Guideline 5.4—Maintenance and usability

Guideline 5.5—Health, safety, and risk

Guideline 5.6—Environmental sustainability

## **Key Characteristic 6: Educator Preparation**

Guideline 6.1—Foundations of early childhood environmental education

Guideline 6.2—Professional responsibilities of the educator

Guideline 6.3—Environmental literacy

Guideline 6.4—Planning and implementing environmental education

Guideline 6.5—Fostering learning

Guideline 6.6—Assessment and evaluation

The Early Childhood Environmental Education Programs: Guidelines for Excellence are available at naaee.org.



## **Nature-Based Preschools**



Native American tribes have practiced naturebased education in North America since long before the creation of the United States. And cultures across the world have understood the value of nature in children's development

for centuries, or longer. The first preschools to identify themselves as "nature-based preschools" in the United States emerged in the 1960s, with many citing inspiration from similar schools in Europe, including especially outdoor programs in Germany and Scandinavia. The concept gradually spread to other areas of the country, with many of the early naturebased preschools operating at nature centers (other early nature-based preschools in the United States were at Mass Audubon in Massachusetts, Kalamazoo Nature Center in Michigan, and Dodge Nature Center in Minnesota).

In the 2010s, however, nature-based preschools began to spread much more rapidly across the United States, spurred by a growing understanding of both the importance of early childhood education and the benefits of nature to child development. The rapid rise of this approach is probably also attributable to some parents' discomfort with increasingly academic approaches to early education, and a perception that nature-based schools can offer young children a more developmentally appropriate educational experience, with benefits that can last a lifetime.

A variety of program types can offer a nature-based approach to early education, and may be called nature preschools, place-based schools, nature kindergartens, forest kindergartens, or zoo and aguarium schools, among other terms. The programs may be located at nature centers, in homes, in community centers, in parks, on farms, in public schools, and in a variety of other settings. Naturebased preschools can have both indoor and outdoor facilities, or can conduct the entire program outdoors (in which case, many are called forest preschools, forest kindergartens, or outdoor preschools).

Regardless of their setting or name, nature-based preschools share several key characteristics, including:

- Working toward dual goals of promoting child development and developing children's environmental literacy
- Using nature as the central organizing theme for the program
- Spending a significant portion of the instructional time outdoors (in some cases, all of the instructional time is spent outdoors)
- Employing a child-led, play-based approach to teaching that adapts to children's interests, abilities, cultures, and environments
- Recognizing the benefits of children's healthy. appropriate risk-taking as the program manages risks in children's play and learning, particularly in the outdoors

Because they provide a unique approach to early education, nature-based preschools use professional practices that are not associated with all early childhood or environmental education programs. This *Guidebook* is a first effort to define the unique professional practices of nature-based preschools in the United States in particular, and to answer the question: What makes a nature-based preschool safe, effective, and inclusive?



Most nature-based educators recognize the New Canaan Nature Center in Connecticut as the first nature-based preschool in the United States with its opening in 1966.

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## **Environmental Literacy in Early Childhood Education**

Sometimes, when people hear the term "literacy," they think about what someone knows. But environmental literacy is about more than what you know. According to a framework developed by NAAEE with support from the National Science Foundation, an environmentally literate person is "someone who, both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the well-being of other individuals, societies, and the global environment; and participates in civic life."<sup>17</sup>

Environmental literacy is about knowledge of the environment, but it's also about caring about people and the environment, and having the motivation and ability to do things to keep the planet healthy for everyone. And that kind of literacy develops over time. Some of the skills, knowledge, and dispositions that educators in a nature-based preschool program might focus on to promote environmental literacy include:

## Skills

- Asking questions and defending ideas
- Making observations
- Problem solving

## Knowledge

- Knowledge of plants and animals
- Familiarity with local ecosystems
- Knowledge of natural resources
- Familiarity with environmental issues relevant to children (for example, understanding that a drought is affecting the water supply)

## **Feelings/Dispositions**

- Care and concern for nature, the environment, and others
- Personal responsibility
- Ecological identity
- Sense of place
- Locus of control (feeling like you can have control over events)

For more on developing environmental literacy in early childhood, see the North American Association for Environmental Education's *Early Childhood Environmental Education Programs: Guidelines for Excellence*. In particular, see Key Characteristic 4: Curriculum Framework for Environmental Learning.

## About this Guidebook



This publication does not describe every practice associated with high-quality early childhood education or early childhood environmental education. Excellent resources for each of those fields are widely available. The *Guidebook* describes only the nature-based early education practices that either are not common in early childhood or environmental education, or are particularly important in a nature-based program where children spend a significant amount of time engaged in nature-based, outdoor play and learning. Several key areas of focus for this publication are important to note:

Ages 3-5: The *Guidebook* focuses on programs serving preschool-aged children (ages 3-5). While early education programs can serve children from birth to age 8 (and nature-based education can be offered at any age), most nature-based early education offered today is at preschools serving children ages 3-5, and as a result, this is the area of focus for this publication. Most of the practices described here are also relevant and applicable beyond this age range, but there are additional considerations for those serving infants, toddlers, or early elementary students that are not described here.

Outdoor Learning: Because a unique feature of nature-based preschools is their use of natural, sometimes wild, environments as a classroom environment, the *Guidebook* describes a number of practices related to outdoor learning. Many of the practices related to indoor learning in nature-based preschools conform to common professional approaches in any high-quality early education or environmental education program, and therefore are not described here. Practices related to indoor education are only described if they are particularly unique or important in a nature-based preschool.

**Equity and Inclusion:** The practices described in the *Guidebook* place a particular emphasis on promoting equity and inclusion in nature-based programs. There is a section focused on this topic within the Administration chapter, but practices and considerations related to promoting equity and inclusion are also found throughout the Guidebook. Research suggests that, to date, nature-based programs have not served non-white and special needs children at the same rates as they are served in the larger education population.<sup>18</sup> Therefore, while practices aimed at promoting equity and inclusion are essential in any early education program, they are detailed here because these practices are vitally important in nature-based programs to make progress toward: ensuring that all young children have access to high-quality, nature-based education; making nature-based education programs (and the larger communities in which they operate) more equitable for the children and families they serve; and ensuring that children with special needs are not shut out of naturebased education.

**Guidance, not a Prescription:** As noted above. the practices described in the Guidebook are not comprehensive; there are many additional practices and considerations associated with running a safe and successful preschool program that are not described here. In addition, the practices do not offer one-size-fits-all requirements for programs. Instead, the practices are intended to capture a wide range of possibilities in the practice of nature-based early education across the United States, where there is a rich diversity of program types and sizes, professional expertise, environments, climates, cultures, regulatory requirements, and many other factors that make programs unique. The *Guidebook* often describes practices broadly in order to capture this wide diversity of programs and to allow for individual decisions about practice that are appropriate to each program.



## How the Guidebook Is Organized

The *Guidebook* describes professional practices used by nature-based preschool educators and administrators in four broad areas of practice: Teaching, Environments, Safety, and Administration.

Practices in each of the four broad areas are grouped according to themes. Practices are printed in bold. The content that follows each practice provides more information about the practice and includes bulleted considerations related to each practice. Considerations may be related practices, examples, resources, or other types of information and, in most cases, are not intended to serve as exhaustive lists, but rather to provide ideas, examples, clarification, and more. A summary of practices can be found on pages 17-21.

The following is an example of a professional practice described in the broad practice area of **Teaching** within the theme of:

## Role of Nature in the Curriculum

Professional Practice

 Classroom activities cross boundaries between indoor and outdoor learning environments, and between different types of outdoor environments.

## **Additional Information**

Nature-based programs reject any notion that "learning" happens indoors and "play" happens outdoors. In a nature-based program, play and learning are deeply connected, and teachers cross boundaries between different areas as they promote children's learning and development, with the following considerations in mind:

#### Considerations

- Activities more traditionally associated with the indoors, such as reading, are conducted outdoors as appropriate.
- Learning and activities that begin in one area carry over into other areas of the school, whether indoors or outdoors.
- Children's needs and interests guide the development and location of activities.

## How the Practices Were Developed

The professional practices described here are intended to represent a broad consensus among nature-based early education professionals in the United States about what signifies high-quality practice in the field. A draft of the practices was developed by the writing team, whose collective experience in nature-based early education totals more than 200 years of practice; spans across the United States; includes perspectives from a variety of program types including nature preschools, forest schools, and public schools; and includes expertise in a variety of sectors of the field, including teaching, administration, teacher preparation, research, special education, and more. The initial draft was developed with input collected from nature-based educators and administrators at professional gatherings."

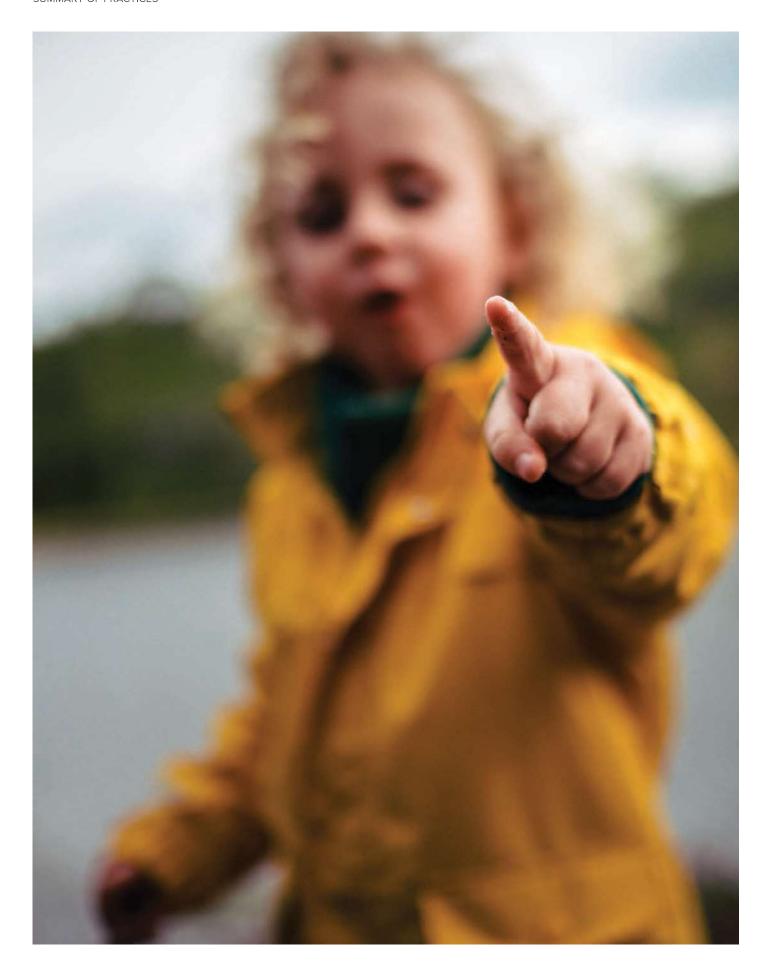
The draft practices were reviewed by a panel of expert reviewers, who expanded the expertise and perspectives used to develop the draft practices. And, finally, the practices were shared with education professionals in a variety of settings in order to collect additional feedback and perspectives from an even wider array of professionals in the field. The feedback provided from these reviews and discussions was used to refine the practices to reflect the widest possible consensus about the practices necessary to run a high-quality nature-based preschool program in the United States today. We know that these practices will evolve over time as they are reviewed and refined in practice, and as conditions change. This drive to continuously reflect on practices in order to improve outcomes for children, families, teachers, and staff is what will keep the nature-based preschool movement growing and thriving.



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## **Summary of Practices**



## **Teaching**

Nature-based preschools promote whole-child development and build a foundation for environmental literacy. Teachers allow for extensive outdoor play and learning and create a caring, stimulating, and safe environment where every child is regarded as a valuable, unique, and capable contributor to the learning community.

## Focus Area

#### **Practice**

#### Goals of the Curriculum

- 1. The curriculum is guided by best practices in early childhood education and environmental education.
- 2. Teachers have different areas of expertise, and meet regularly to plan as a team.
- 3. Teaching practices and curriculum are based on current research and theory.

## Role of Nature in the Curriculum

- 1. Teachers familiarize children with the plants, animals, and natural features and phenomena in their surroundings.
- 2. Teachers support and encourage children's play and investigations with natural materials.
- 3. Classroom activities cross boundaries between indoor and outdoor learning environments, and between different types of outdoor environments.
- 4. Teachers promote learning from season to season, supporting children's understanding of patterns and changes through the seasons.
- 5. Teachers model care and concern for nature and the environment.
- 6. Human communities are considered part of, and dependent upon, the natural environment.
- 7. The entire learning community engages in environmentally friendly practices.

## Focus on Outdoor Learning

- 1. Outdoor learning is a central feature of the program, with frequent, regular opportunities for outdoor play and learning in natural spaces.
- 2. Teachers and children are dressed appropriately for the weather, and teachers demonstrate positive attitudes about experiencing various weather conditions.
- 3. Teachers develop and maintain teaching materials designed or adapted for outdoor use.

## Emergent, Play-Based Curriculum

- 1. Children's interests and abilities direct learning opportunities and assessment.
- 2. Teachers emphasize opportunities for individualized learning across learning environments.
- 3. Children's inquiry is used to encourage higher-order thinking, and the inquiry process is allowed to continue for as long as children's interest remains.
- 4. Teachers provide a daily routine that allows for flexibility.



## **Teaching** Continued

#### **Focus Area**

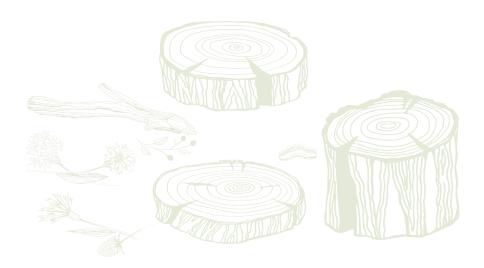
#### **Practice**

## Community of Capable Learners

- 1. Teachers are co-learners with children.
- 2. Teachers encourage and support children's developing abilities to take care of their own needs and safety.
- 3. Teachers support and encourage children to be change agents in the learning community and the broader community.
- 4. Teachers provide opportunities for child-child interactions to promote collaboration and conflict resolution.
- 5. Teachers provide an environment that values diversity and sustains children's cultural identities.
- 6. Teachers modify the curriculum and environment to individualize learning opportunities and scaffold learning for all children.

## Documentation and Assessment

- 1. Children's progress in both standard early childhood developmental domains and domains that relate to the development of environmental literacy are included in assessment measures.
- 2. Teachers document and assess children's learning through observation and artifacts so as not to interfere with children's learning experiences.
- 3. Teachers engage children in documenting their own individual and group learning so children can process and reflect on their own learning over time.
- 4. Teachers use documentation and assessment to inform the emergent curriculum.
- 5. Teachers regularly share documentation and assessments with parents and caregivers.





## **Environments**

Learning environments in nature preschools are designed to meet children's developmental needs and promote children's active engagement with nature. Outdoor environments may include bounded play spaces, which are more managed, and more wild spaces. Most programs also include indoor spaces, which also promote nature connections.

## Focus Area

## **Practice**

#### Universal Elements

- 1. Natural and environmentally friendly materials are used as a primary source for construction, play, and learning.
- 2. Environments are designed to accommodate the flexible and changing nature of the nature-based curriculum.
- 3. Environments are designed or modified as needed to accommodate the needs of every child in the program.
- Activity centers provide predictable spaces that promote learning in all developmental domains through interactions with natural materials, other children, and teachers.
- 5. Spaces provide for children's transitions between activities, whether through transition spaces, transition routines, or both.
- 6. Programs are attentive to the need for storage of gear and materials in indoor and outdoor environments.

## Managed Outdoor Spaces

- 1. Landscape features promote connections to nature and support growth in all developmental domains.
- 2. Outdoor areas are large enough to support a variety of uses of the space.
- 3. Outdoor areas are designed for comfort and ease of use.

## Wild Outdoor Spaces

- 1. Teachers consider the affordances that wild spaces may offer for play and learning in selecting sites to visit.
- 2. Wild spaces are selected and used in ways that maintain the ecological integrity of the site.
- 3. Access to wild spaces is offered as frequently as possible.
- 4. Children are offered access to a diversity of local ecosystems.
- 5. Wild spaces may require trails or other features that allow children to access and explore the area safely and with minimal damage to the ecosystem.

#### **Indoor Environments**

- 1. Architectural decisions promote children's connections to nature.
- 2. Classrooms are arranged and decorated in ways that promote nature and the role of the child in the curriculum.
- 3. Classroom materials encourage and support exploration of the natural world.



## Safety

Learning to negotiate risk is an important part of early childhood development, but risk is only healthy insofar as it is managed, to the appropriate degree, by a knowledgeable and attentive adult. Nature-based programs manage hazards in the environment, and create environments and experiences that allow children to take risks that are individually and developmentally appropriate as they engage with the natural world.

#### Focus Area

## **Practice**

## Safety Training and Professional Expertise

- 1. Teachers and administrators are trained in adult and pediatric CPR and first aid (or other skills mandated by the state in which the program operates) and possess other training as appropriate to the program's location and activities.
- 2. Programs rely on outside experts as needed to provide guidance in maintaining a safe program.

## **Pre-Program Planning**

- 1. Regular site assessments of outdoor environments identify hazards and plan for the removal or mitigation of hazards in the environment.
- 2. Programs develop benefit-risk assessments that examine benefits and risks of activities in support of the curriculum and develop policies for managing risk in activities.
- 3. Programs develop and communicate emergency policies.
- 4. Programs develop policies and procedures for protecting the health and hygiene of children and teachers in outdoor environments.
- 5. Programs secure, maintain, and use safety gear appropriate to the program and its activities.
- 6. Children and teachers are equipped with clothing that is appropriate to the activity and weather conditions.
- 7. Safety practices are informed by and communicated to parents and caregivers.

## Safety in the Field

- 1. Teachers help children build risk management skills that are appropriate to the children's developmental stage and abilities, and to the program's activities and settings.
- 2. Teacher-child ratios ensure adequate supervision, particularly in wild outdoor environments.
- 3. Boundaries set in outdoor and wild spaces ensure teachers maintain a line of sight and auditory connection.
- 4. Programs employ strategies that ensure effective supervision.

## **Post-Program Practices**

- 1. Programs regularly schedule time to evaluate and adjust safety practices as needed.
- 2. Safety incidents (such as injuries or emergencies) are promptly reported to parents or caregivers, teachers, administrators, and appropriate state agencies as required, and are reviewed to determine whether policy changes are needed.
- 3. Safety-related curriculum and teaching strategies are reviewed for effectiveness and adapted as needed.



## **Administration**

Program administration turns a nature preschool's philosophy into policy and makes that philosophy visible to program staff, families, and the community. Nature-based program administration pays careful attention to the unique considerations of outdoor teaching and learning, promotes equity and inclusion in the program, and honors teachers and teachers' work.

## Focus Area

## **Practice**

# Staff Qualifications and Professional Development

- 1. Teaching teams include expertise in early childhood education, environmental education, and outdoor safety.
- 2. Program directors help round out teaching teams' expertise and also are qualified to provide overall program administration and leadership in a nature-based setting.
- 3. Program staff is reflective of and responsive to the community and cultures the program serves.
- 4. The program demonstrates commitment to ongoing professional development to enhance the knowledge and skills of teachers and administrators.

#### **Policies and Procedures**

- 1. A "School Handbook" is available to current and prospective families and caregivers to gain an understanding of the goals and policies of the program.
- 2. A "Staff Training Manual" is available to all staff members and includes all the information included in the "School Handbook" as well as other content specific to operating a nature-based preschool program.
- 3. School policies and procedures are reviewed and updated on an established schedule and as needed.

## Program Evaluation and Improvement

- 1. Programs are licensed when possible.
- 2. Programs use available tools to assess and improve program quality.
- 3. Programs employ systems to regularly observe and evaluate teacher performance.

## **Equity and Inclusion**

- 1. Programs maintain an inclusion policy that commits to meeting the needs of all young children.
- 2. Programs actively promote their commitment to equity and inclusion.
- 3. Early intervention, supports, and resources are readily available to children, families and caregivers, and teachers.
- 4. Programs are culturally inclusive and responsive, emphasizing the value of diversity and working to promote equity.

## Community Engagement

- 1. Programs employ a community-based approach that connects the school community to the wider natural and cultural community.
- 2. The program develops positive relationships and communication with parents and caregivers.
- 3. Nature-based programs partner with appropriate organizations to meet program and community goals.
- 4. Volunteers enhance the school community as appropriate to the program.
- Programs maintain positive relationships with boards, executives, institutions, or other individuals or groups who have decision-making authority over the program.