

# Nature Play at Home

A Guide for Boosting Your Children's Healthy Development and Creativity





**Nature Play at Home is a component of the Nature Play Space™ Design Project, a joint project of the National Wildlife Federation and the Natural Learning Initiative, dedicated to creating tools and resources that restore nature to children's everyday outdoor play and learning environments.**

## **National Wildlife Federation**

The National Wildlife Federation (NWF) is America's largest conservation organization, inspiring Americans to protect wildlife for our children's future. NWF programs educate and inspire people from all walks of life to protect wildlife and wildlife habitat.

NWF focuses its conservation and education work in three major areas that will have the biggest impact on the future of America's wildlife:

- Seeking solutions to global warming which poses a major threat to the nation's wildlife
- Protecting and restoring wildlife habitat, especially habitats that provide a home for threatened and endangered species
- Connecting children to nature for a nation of happier, healthier kids. These connections in early life will teach children to appreciate and respect the natural world so they can be good conservation stewards in the future.

Be Out There™ is NWF's movement to reconnect families with the outdoors. Kids today spend twice as much time indoors as their parents did, missing out on the simple pleasures and lasting mental and physical health benefits of daily outdoor time.

NWF's practical tools and information help make being outside a fun, healthy and automatic part of everyday life for American families. By raising awareness, inspiring behavior change and taking action, Be Out There will help get American children and families back outside – where they belong! [BeOutThere.org](http://BeOutThere.org).

## **Natural Learning Initiative**

The Natural Learning Initiative (NLI) is a research and extension program of the College of Design, NC State University. The NLI mission is to promote the importance of the natural environment in the daily experience of all children and their families, through design, research, education, and dissemination of information. NLI works with multidisciplinary partners to implement the critical role of the natural world to support healthy child development, pro-social values, and motivation of learning across all subject areas.

NLI believes that understanding nature's processes and their interdependence with human life is a critical educational task for creating an ecologically sustainable society. NLI collaborates with other researchers, designers, educators, environmental educators, planners, extension agents, public officials – all professionals working for and with children to help communities create stimulating healthy places for play, learning, and environmental education.

NLI works with a variety of clients in the nonformal and formal sector of education, including: schools; parks and recreation systems; childcare centers; afterschool programs; federal, state, county, and municipal governments; residential developers; zoos; botanical gardens; children's museums; and environmental centers.

## Acknowledgements

*Research, documentation, manuscript preparation and layout design by the Natural Learning Initiative:*

Robin Moore, Dipl.Arch, MCP, Hon.ASLA, Director  
Nilda Cosco, PhD, ASLA, Education Specialist  
Sarah Werner, MLA, Associate ASLA, Design Assistant  
Julie Murphy, BLA, Design Assistant  
Sarah Little, MLA, RLA, Research Assistant  
Elizabeth Valsing, BA, Project Coordinator

*National Wildlife Federation:*

Allen Cooper, JD, MPP, Director State Education Advocacy  
All those who have contributed as part of the NWF Team.

Many thanks to those who have contributed photographs for use in Nature Play at Home.

Information in this report can be shared/reproduced only with clearly stated attribution to National Wildlife Federation (NWF) and Natural Learning Initiative (NLI).

© 2012 National Wildlife Federation and Natural Learning Initiative. All Rights Reserved

### Disclaimer:

The purpose of the Nature Play at Home guidebook is to raise awareness and provide education about considerations for Nature Play Spaces™; it is not to be considered as an all-inclusive resource. Safety requires common sense specific to the play space involved, age and children skills. While the intent is to provide a general resource for reconnecting children and families to nature, the authors and program sponsor disclaim any liability based upon information contained in this publication. The Natural Learning Initiative (NLI) assumes no responsibility for the design or installation of outdoor components for playing and learning. In no event will NLI be liable for any loss or damage including without limitation, indirect or consequential loss or damage incurred during the construction or use of the outdoor learning environment at home or other location. Site owners are responsible to inspect, repair, and maintain all elements and manage site-specific supervision sightlines, landscaping, and safety requirements. The Natural Learning Initiative, the National Wildlife Federation, and its divisions provide these comments as a public service in the interest of integrating nature into the home environment while advising of the restricted context in which it is given.

# Nature Play at Home

A Guide for Boosting Your Children's Healthy Development and Creativity



# Contents

## Executive Summary

<b>Introduction</b> .....	1
Developmental Benefits of Nature Play.....	1
Getting Started.....	3
Involving the Whole Family.....	3
Managing Your Nature Play Space™.....	3
Risk Taking – The Essence of Healthy Development.....	4
<b>Nature Play and Learning Settings</b> .....	6
Using the Guide – Implementing Change Piece by Piece.....	6
Required Effort Scale.....	7
Loose Parts (Natural and Not).....	8
Natural Construction.....	9
Water Play.....	10
Earth and Mud Play.....	11
Acoustic Play.....	12
Fairy Villages.....	13
Shade.....	14
Backyard Habitat.....	15
Sensory Garden.....	16
Grass Maze.....	17
Edible Plants.....	18
Adventure Pathways.....	19
Multipurpose Lawn.....	20
Play in All Weather.....	21
Balancing Logs.....	22
Sand Play.....	23
Vine Teepee.....	24
Play Deck.....	25
Water Gardens.....	26
Places for People Big and Small.....	27
Small Space Solutions.....	29
<b>Closing Thoughts</b> .....	33
<b>Additional Resources</b> .....	34





# Executive Summary

In the midst of busy school schedules, sports, and other extra-curricular activities, it is often hard to fit in a trek to a park or natural area. Not to mention the lure of technology and other factors that all too often trump outdoor play as a part of children's everyday routine. The new trend towards indoor childhoods is contributing to dramatically increased childhood obesity rates, vitamin D deficiency, and a generation of tuned-out, stressed-out kids.

The problem is not going unnoticed by the American public. A recent survey by The Nature Conservancy indicated that 50 percent of adults think "kids not spending enough time outdoors in nature is an extremely or very serious problem." Another 30 percent feel it is a "somewhat serious problem."

The good news is that beneficial outdoor time for your kids is as close as your own backyard, patio or balcony! Creating natural play opportunities can be part of the solution to increasing the amount of time kids spend in the great outdoors for the health of their minds, bodies, and spirits.

This guide shows easy, affordable ways you can turn your backyard or other types of domestic outdoor spaces into vibrant Nature Play Spaces™ for children so they can reap the physical and mental benefits of playing outside. Best of all, these ideas provide hours of fun for kids so instead of begging for 15 more minutes on the computer they will welcome the invitations to "go outside and play!"



*Children exploring this wooded space search for a glimpse of wildlife.*

Use the how-to steps contained in this guide to turn your domestic outdoors into a vibrant, fun-filled Nature Play Space™ where children learn by:

- Gathering natural materials like sticks, leaves, and grasses to use in imaginative 'loose parts' play;
- Collecting branches, sticks, and string to make an area for building forts, nests, and all types of shelters;
- Using a hollow log, planter or corner of the yard to make a miniature scale fairy village;
- Planting (or potting) fragrant, colorful, and textured plants like rosemary, lavender, and thyme to make a sensory garden;
- Observing surrounding wildlife including birds, squirrels, and fascinating ants;
- Constructing a raised-bed "first" vegetable garden to understand that food comes from only one place, the Earth;
- Providing food, water, nesting material, and shelter for wildlife to make your yard a Certified Backyard Wildlife Habitat and a place to appreciate and understand birds, butterflies, and other creatures;
- Setting up small stumps of various heights that children can step across for learning balancing skills;
- Creating a play deck that encourages dramatic play and becomes an outdoor stage for skits presented to parents. Natural elements found in the yard can be used as props.

Every home can become a Nature Play Space™ for children, whether it is a wooded rural lot, a suburban lawn, or an urban patio or balcony. It doesn't have to be done all at once, begin with one or two elements and build on it over time. If one idea doesn't work in your space, try another. The beauty of Nature Play Spaces™ is they are flexible enough to meet everyone's needs.

Join NWF and NLI in our campaign to bring nature back to childhood by making your home a Nature Play Space™ and welcoming nature play at home!



# Introduction

## Developmental Benefits of Nature Play

All parents search for ways to support their child's healthy development. Playing in nature is an important part of the mix. Developmentally, the primary value of outdoor, nature spaces is how they support children's unstructured, spontaneous play. Children's lifestyle research indicates a trend towards more home-centered activity, with decreased opportunities for children to participate in unrestricted free play, and less time outdoors. Contrariwise, research shows that being outdoors in nature offers benefits to children:

- *Children will be smarter, better able to get along with others, and healthier and happier when they have regular opportunities for free and unstructured play in the out-of-doors.*
- *Play in nature helps children focus attention and can reduce ADHD symptoms.*
- *Studies of children in schoolyards found that children engage in more creative play in green areas, and they also play more cooperatively.*
- *Positive, direct experience in the out-of-doors with a trusted adult – parent, grandparent, or guardian – are the two factors that most contribute to individuals choosing to take action to benefit the environment as adults.*

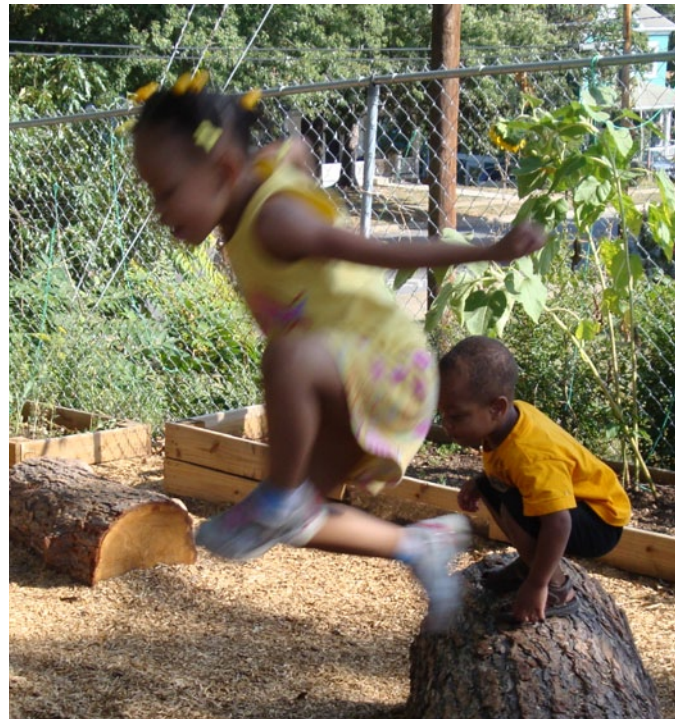
Above, is just a brief selection from the many benefits listed with references and abstracts by the Children & Nature Network (C&NN). Follow links to the C&NN website and searchable Research & Resources section, in the Online Resources section at the end of this guide.

*“Children have a natural affinity towards nature. Dirt, water, plants and small animals attract and hold children’s attention for hours, days, even a lifetime.”*

- Robin Moore and Herb Wong



Children learn about the environment by interacting with it on their own terms.



As children climb, balance, and jump, they strengthen and develop major muscle groups.

Play in nature has different impacts at each stage of development. As children grow and develop, they need to confront new challenges at the edge of their known world that will constantly exercise newfound skills. This means a truly “developmentally appropriate” environment must be designed to offer a diversity of settings and uses to engage the developing child on a daily basis, constantly supporting the growth of new skills and knowledge at each developmental level.

**Think of it this way:**

**For Infants** – A comfortable place for parents and young children to be out in nature together. Gardens with colors, textures, sounds, and smells to stimulate the senses.

**For Toddlers** – A space for beginning steps of independent exploration. Encouraging walking and exploring nature using balance logs, sensory gardens, edible and wildlife gardens, and lawns for active play. Developing creativity and imagination, stimulating free play. Observing, naming, and discovering. Moving objects from place to place.

**For Preschoolers** – Places to support cognitive development, gross and fine motor development, and science learning. Social skills and dramatic play. Construction play, building, sifting, sorting, measuring, digging. Running, jumping, climbing, hopping, skipping, dancing. Weather, habitat and wildlife exploration and observation. Experimenting.

**For School-Age Kids** – Spaces to deepen understanding of plants, animals, and human interactions. Observing changes and effects of weather and seasons and how they relate to changes in the environment and other living forms. Gross motor exploration – climbing, running, balancing. Games with rules in open areas. Designing and building forts and animal habitats. Places to get away.

Let’s remember children with disabilities have as much right to connect with nature as other children. Always offer appropriate opportunities for all children to enjoy nature year-round.

The list of healthy play activities in Nature Play Spaces™ underscores the importance of multisensory learning that can never be gained in front of a TV or computer alone. Children’s direct experience of nature may lead them to ask deeper, meaningful questions that can be further investigated in the digital world before returning to nature to apply newly acquired concepts.

Nature-filled yards, as well as balconies and patios, combined with unstructured nature play, serve to nurture a love of the natural world. When children learn early in life about the beauty of nature, they are more likely to retain those values as adults and become active stewards of the environment.



*Children observe and learn about the natural environment around them as they play.*

## Getting Started

The first step to naturalizing your yard, balcony or patio, is to take inventory of what you already have. A stack of unused pots can be turned into a colorful, edible container garden. Large shrubs can be pruned to provide a child-size hiding space. A low, wet spot may provide a place where children would love to dig and explore... all they need is permission.

Assessing what already exists and starting small can help ensure success in the years to come. Incorporating nature play elements into your home landscape is all about planning and making incremental changes over time, so that as your children grow, so does their engagement with the outdoors. The most important goal should be to create outdoor spaces where children and families can enjoy being together.

## Involving the Whole Family

Involving children from the start generates enthusiasm for the whole process, and encourages them to feel comfortable making suggestions about how they want to use the outdoors, and what natural elements excite them the most. Getting children engaged in both the annual cycle of seasonal changes in the landscape, and the year-to-year changes that come as plants mature and the landscape 'fills in,' is a learning experience that will stay alive throughout life.



*Nothing beats children's sense of accomplishment from growing fruits and vegetables themselves.*

## Managing Nature Play

While major annual physical management tasks (e.g. pruning) will require parental or professional involvement, children can still "help" with daily or weekly care and maintenance routines that can be fun, rewarding activities.

Don't think of weeding as a chore. Encourage children to become "plant detectives." Support their curiosity about the new plants that pop up in the landscape. Investigate online resources to identify 'weeds.' Ask children to count how many types they can find and remove. By managing their own outdoor space, children gain ownership. Along with other family members, they will become confident shapers of space to fit their needs.

As with any natural environment, Nature Play Spaces™ take time to evolve; nonetheless, from the first tomato plant planted and the first bird feeder hung, children will acquire a special sense of meaning about their surrounding environment as time passes.



*Vine teepees are a great first step in a Nature Play Space™. They are playful, simple, compact, and can support vegetables.*

## Risk Taking – The Essence of Healthy Development

“Nothing ventured, nothing gained” is a well-worn proverb. Nowhere is this more relevant today than children’s daily life, which is often seen as over-protected and overly structured, leaving children little space and time to engage in creative free play outdoors in nature. The value of this traditional aspect of childhood is based on the fact that until yesterday it was the learning process of childhood. Outdoors was where children learned to get along with each other, learned how to read the landscape, how to harvest resources and use them creatively for survival, and how to test and develop their bodies by interacting with their surroundings. Children learned through direct experience, by doing, by collaborating with others in order to survive. If they had enough to eat, they were physically healthy.

Risk taking is still essential in helping children to build problem solving skills and competency to better prepare for life’s challenges. Children need to explore and discover at their own pace. To learn, they must constantly push the limits of their own experience – in balance with changing stages of maturity. Particularly in the early years, supervision is essential to ensure that activities do not move beyond healthy risk-taking, which in itself is a positive aspect of outdoor play and yard management. Parents can stimulate curiosity, encourage exploration, and respond to questions but at the same time take care not to disrupt sequences of intense, playful discovery.



*Risk taking varies with age and can be as simple as climbing, balancing, and jumping from a new height.*



# Nature Play and Learning Settings

## Using the Guide – Implementing Change Piece by Piece

### 1. Browse the list of settings.

Look through the illustrative photos and read the descriptions. The settings are arranged in order of effort and difficulty required to implement them. Some very simple settings may be implemented in a day, some may require a weekend, some longer still.

### 2. Decide which settings are a good fit for your family and space.

As you browse the guide, highlight the settings that strike you as most valuable, and prioritize which ones to begin with for your family and your space.

### 3. Create a plan for setting locations in your space and the order of implementation.

Create a plan to locate the settings in your space – this does not need to be an architectural drawing, it can be as simple as a list of settings and approximate locations for installation. The point is to think through the most critical aspects for each installation such as sun exposure, shade, drainage, ease of access, play value, and year round use.

### 4. Research any further resources and inspiration needed to finalize details of the settings you have chosen.

Use the guide as a starting point – a spark to inspire the creation of your family's unique Nature Play Space™. In this age of connectivity the guide is not designed to stand alone, but to be a part of a broader network of home-scale nature play resources available online. Make the most of resources online at [www.naturalearning.org](http://www.naturalearning.org) and [www.BeOutThere.org](http://www.BeOutThere.org), as well as those listed at the end of this guide.

### 5. Get to it! Implement settings piece by piece, adjusting as you go and see what works well and what needs improvement as you progress.

Once you have set up a plan for where the settings will go and how you will implement them, it's time to make it all happen and bring nature play to your home, one step at a time. As you implement settings, make adjustments as you see what works and does not work for your space and your family. Perhaps you will need more shade for the sand play, a different kind of vine to grow on the teepee, or more space for balance logs. Keep in mind the goal is a dynamic, evolving Nature Play Space™ that changes with the weather, the seasons, and the growth of your children, a space that grows with the family.



## Required Effort Scale



The settings listed in this guide are arranged in order of difficulty and effort required to implement them, indicated by the number of shovels (1 to 5) in the upper right corner of each setting page.



*One shovel:*  
**Straightforward, minimal effort.**



*Two shovels:*  
**Fairly simple to implement.**



*Three shovels:*  
**Moderate effort and planning.**



*Four shovels:*  
**Moderate/high level of effort.**



*Five shovels:*  
**Highest degree of effort and substantial planning.**

Many settings have a range of difficulty based on the form and implementation of chosen components. For example, the Edible Plants setting ranges from two to four shovels because planting herbs in a pot by a front door is fairly simple. In contrast, the planning and work required to build a set of raised garden beds with timber construction to grow a full crop of vegetables and fruit is far more involved.

The ratings of difficulty are only a guide. The actual time, effort, and difficulty involved in each particular project will vary according to the project size and skills of the person implementing the project.



*Children love to help with projects around the yard, and in the process they build independence and responsibility.*

# Loose Parts (Natural and Not)



*Anyone hungry?*



*Natural loose parts can become almost anything a child imagines, here a worm home.*

**Loose Parts (Natural and Not)** include almost any found object or play material that increases play and learning. To start, gather some of nature's loose parts already present in your yard.

Children's creativity is driven by anything that can be manipulated, changed, or moved around. Rather than purchasing toys for your children play to with outdoors, consider recycling and reusing everyday objects and taking stock of what nature provides for free!

## Materials:

- Twigs and bark
- Pinecones
- Stones
- Leaves
- Seeds and flowers
- Bamboo poles
- Tree cookies
- Sawn logs
- Reused everyday objects

- 1.** Gather and prepare loose parts; have your kids help.
- 2.** Check over thoroughly for splinters, sharp edges, or potentially unsafe conditions.
- 3.** Let them play!

# Natural Construction



*A permanent “armature” of connected poles with logs, ready for additions.*



*Natural construction can be small, like this “campfire.”*

**Natural Construction** offers children natural and manufactured materials such as logs, branches, rope, and bamboo for building forts or other “creations” large and small. These materials can provide hours of engrossing activity for long play sequences, day after day. The only limit to the many variations of forts, cubbies, clubhouses, hideouts, and dens is children’s imaginations.

## Materials

- Branches
- Bamboo
- Straw bales
- Pieces of burlap
- Cardboard boxes
- Rope and twine
- Tarps or outdoor fabric
- Leaves & pine needles
- Logs or stumps
- And more!

**1.** Choose an area that includes trees, logs, fences, walls, or posts to provide a structure for children to build against or create a permanent armature to support children’s ever-changing, imaginative constructions.

**2.** Select natural and manufactured building materials carefully to allow for safe, fun building (no sharp, splintered edges).

**3.** Gather a mix of materials in the natural construction area for the children to use.

# Water Play



*A hose and watering wand are all that's needed for refreshing summer play.*



*Buckets and squirt toys add to the fun.*

Toddlers love to transport water from one place to another. Buckets, cups, and containers allow young children to “water” plants (and themselves) over and over. Repetitive actions reinforce skills and bring children great enjoyment.

**Water play** is highly interactive, multisensory, and universally loved.

Although there are many variations, the most versatile and fun water play setting is a garden hose and a well-drained, thick turf lawn. Alternately, troughs, channels, and water play tables engage children by offering them play opportunities with floating objects and building dams.

Easier yet, make the most of the next rain shower! In a matter of minutes, ordinary yards will transform into a wonderland of streams, rivers, lakes, dams, oceans, and waterfalls. Of course, dress appropriately and be sure there's no sign of thunder.

## Materials

- Garden hose
- Sprinklers
- Squirt toys
- Sponges
- Water table
- Buckets & kiddie pools
- Misters
- Bubbles
- Rain showers

**1.** Locate water play almost anywhere—just be sure the area is well drained and that ground surfaces don't get too slippery.

**2.** Add water!



*Water play and watering the garden go hand in hand. Ground cover is nonslip, well-drained mulch.*

# Earth and Mud Play



Looking for creatures in garden soil.

**Earth and Mud Play** is an integral part of healthy childhood. Becoming familiar with the surface of the planet we live on by scooping, scratching, smoothing, piling, digging, and discovering the properties of earth itself, is a fascinating activity for children of all ages.

Earth and mud play can vary widely depending on you and your child's preferences and what your space allows. If limited to a small patio or deck, try filling a large tub or bucket with soil and adding a few scooping/digging implements. In a larger space, designate a digging or earth play area by surrounding it with logs or stones (great for sitting on, too!). Toddlers require only a few square feet to dig.

For more information about the benefits of playing in the dirt and more ideas, see the NWF's publication "*The Dirt on Dirt*" (refer to the resources section at the end of this guide).



Full body mud play is a stimulating, sensory experience not to be missed.

## Materials

- Earth
- Soil
- Dirt
- Mud
- Water
- Digging toys
- Old pots & pans
- Dumper trucks
- Buckets & shovels
- Stones/logs for sitting

1. Designate a place for earth or mud play.
2. Provide earth, water, and other materials you may have on hand.
3. Let the kids play!



The feel of the earth on bare hands.

# Acoustic Play



Acoustic play works well with reused kitchen pans and a ready supply of “drumsticks”.



Combining settings adds value in small spaces. Here, acoustic play in a teepee.

**Acoustic Play** (dare we call it “music”?) is a popular outdoor sensory activity. Children enjoy producing sounds, testing the environment’s responsiveness, and comparing the results with different materials. For children with disabilities, acoustic play may be highly stimulating.

An acoustic play setting could be as small as a set of chimes in a tree or as large as an elaborate stand with outdoor drums, tambourines, bells, and whistles. Kitchen utensils commonly used in acoustic play settings can be found inexpensively at local second-hand stores or one day decide your own kitchen needs upgrading, giving utensils a playful new purpose.

## Materials

- Pots, pans, lids, spoons
- Chimes
- Bottles filled with dry beans
- Bells
- “Drumsticks”
- PVC pipes cut to different lengths
- Buckets
- Outdoor instruments

1. Gather & create sound-making objects.
2. Find and/or build a structure to attach the sound-makers (such as fence, a post or from a tree).
3. Secure sound-makers with outdoor-quality cord. Make sure they hang freely for clean sounds.
4. Provide sticks, spoons, “drumsticks,” etc.
5. Remember to ask if the neighbors are music lovers!



# Fairy Villages



*Raised planters are perfectly suited for creating enchanted villages of all types.*



*Twigs, nuts, and berries just waiting for imaginations to animate them.*

**Fairy villages** are homes for elves, fairies, and other beings of children's imagination and are a special form of natural building. They provide enchanted places that stimulate creative, dramatic play in make-believe settings.

Fairy villages can be any scale, created inside a hollow log, on top of a tree stump, in a planter, on a patio or in a miniature woodland in a quiet corner of the backyard.

## Materials

- Hollow logs
- Mushroom sculptures
- Leaves
- Sticks
- Acorns
- Ferns
- Bark
- Flowers
- Moss
- Miniature accessories

- 1.** Find (or create) an enchanted place for your fairy village.
- 2.** Provide small, natural loose parts that contribute to the construction of a miniature fantasy world where fairies, gnomes, elves or dragons might reside.
- 3.** Leave notes and see if they respond.
- 4.** Link to children's favorite fairy stories.
- 5.** Keep an eye out for the goblins!

# Shade

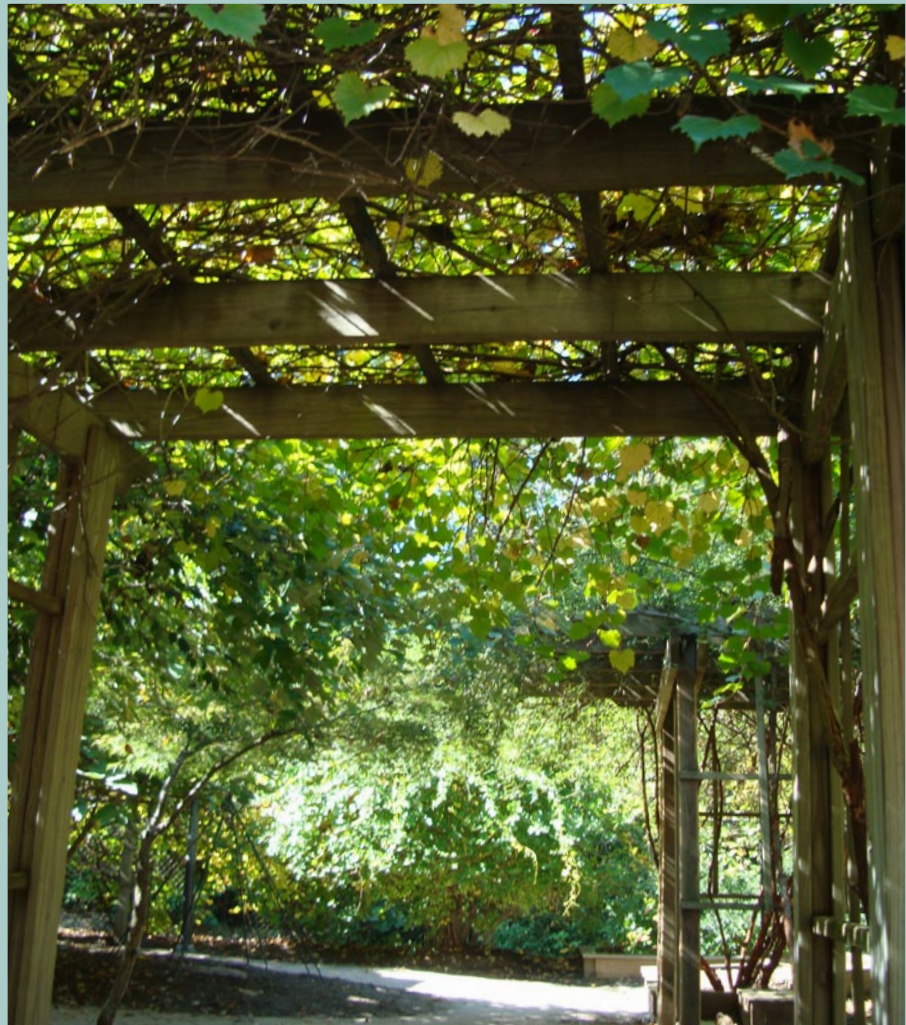
**Shade** is an essential component outdoors for the comfort and health of young children and other users. Providing shade extends and enhances time spent outdoors, increasing children's contact with the natural world in a safe and comfortable way. Manage your landscape effectively by considering the amount of shade required for each setting.

## Ways to Create Shade

- Trees
- Pergolas
- Arbors
- Umbrellas
- Shade tents
- Vine-covered structures



*The shady patch around a small tree can create a magical world for a child and protection from too much sun.*



*Grape vines growing above an arbor create beautiful mottled shade.*

*“He that plants a tree loves others besides himself.”*

-Thomas Fuller





# Backyard Habitat



*Bird watching from a balcony.*

**Backyard habitats** for animals increase the frequency, diversity, and predictability of wildlife interactions by providing food, water, and shelter. A diverse backyard habitat offers glimpses of birds, insects, lizards, toads, frogs, turtles, butterflies, fireflies, worms, and much more.

For more information, see the NWF’s Garden for Wildlife website and learn how your backyard can become an official Certified Wildlife Habitat (refer to the resources section at the end of this guide for links).

## Materials

- Native plants for cover, food, and nesting materials
- Ground-level water for lizards and frogs
- Birdhouses
- Bird feeders
- Birdbaths
- Old stumps, brush, and stones

**1.** Provide food and cover for wildlife, ideally with native plants.

**2.** Supply a water source: bird bath, pond or rain garden.

**3.** Place a variety of opportunities for cover and nesting.



*A small birdbath provides the entertaining spectacle of birds bathing.*



*Inspecting the day’s catch – a worm.*



*Planting native species encourages birds, butterflies, and other “pollinators” to frequent your garden.*

# Sensory Garden



*This sensory garden incorporates fragrant herbs between stepping stones, surrounded by plants of various colors and textures.*

**Sensory Gardens** contain fragrant, colorful, and textural plants designed to stimulate the senses and thereby brain development. Herbs (rosemary, lavender, thyme), ground covers, flowering perennials, ornamental grasses, and colorful shrubs all complement one another and provide many scents, textures and colors. Chimes, colorful mobiles, mosaics, and other garden art can add richness to your sensory garden.

Sensory plants combined in a large planter or pot work well in a small space. In a larger yard plant the sensory plants between stepping stones or around seating for a fuller sensory experience.

Sensory gardens complement backyard habitats by offering a lush variety of plants for wildlife. They stimulate the senses and offer low-key learning through observation in a restful, relaxing space.

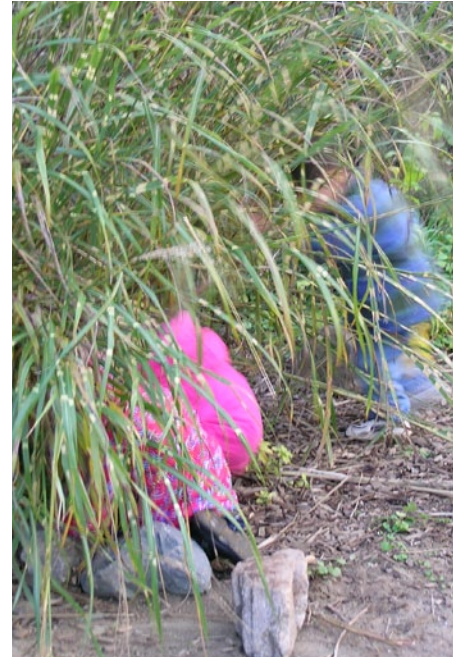
## Materials

- Sensory plants
- Pots or planters
- Stepping stones
- Textural artwork
- Seating such as benches, swings or hammocks

1. Find a sunny place for your sensory garden to thrive.
2. Gather a variety of sensory plants to install.
3. Explore the sensory garden with your children by seeing, hearing, touching, tasting, and smelling.



# Grass Maze



*Children use grass mazes in all kinds of ways: for chase games, hide and seek, imaginative play, and natural loose parts to harvest.*

**Grass Mazes** contain tall, hardy ornamental grasses spaced far enough apart to create the feeling of a maze, enveloping children and stimulating movement through a circuit that triggers curiosity and invites exploration of ever-changing pathways.

For more information, see the NLI website Green Desk post on Grass Mazes (refer to the resources section at the end of this guide), including a list of recommended grass species and spacing recommendations. Select grasses that are soft, checking to make sure the edges of the grass blades are not too sharp.

If there is not enough room for a full-sized grass maze in your yard (ideally at least 100 square feet), planting a small grouping of 3-4 grasses still works well, even in pots, for young children to explore.

## Materials:

- Ornamental grasses
- A sunny place to plant them

1. Decide on a location for your grass maze: somewhere sunny and ideally at least 100 square feet.
2. Select soft, hardy, ornamental grasses.
3. Plant grasses and enjoy exploring!

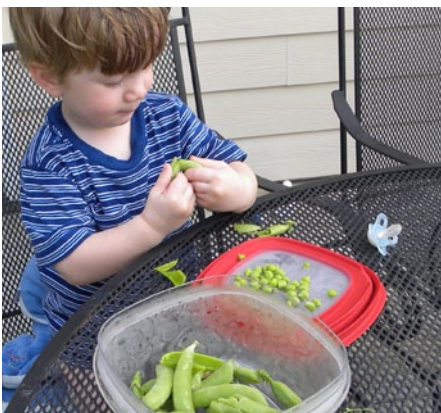
# Edible Plants



Large or small, edible gardens create a sense of wonder in children that can't be matched.



Children love to help tend and plant.



Harvesting and tasting peas.

**Edible Plants** bring the wonder of seed to table experiences regardless of the size of your outdoor space. On a small patio or deck, use containers to grow edible fruits, vegetables, and herbs for the whole family to enjoy. With a larger space, try special garden beds and encourage children to grow and tend for themselves. Use fruiting trees or shrubs in place of traditional ornamental plants to maximize space.

Don't forget, kids enjoy helping with garden tasks. Planting, weeding, watering, and harvesting all provide hands-on play and learning opportunities. Cooking and eating together outdoors or indoors are the final, delicious steps. Remember, picky eaters are more likely to try veggies they helped grow.

See the Additional Resources section for more information.

## Materials

- A sunny spot (most vegetables and fruits need at least 6 hours of sunlight each day)
- Quality garden soil
- Seeds, seedlings, or plants
- A water source

**1.** Decide with your kids what kinds of fruits and vegetables to grow.

**2.** Find a sunny patch, and amend the soil as needed.

**3.** Plant, water, tend, cook, eat and enjoy the fruits of your labor.

# Adventure Pathways



*Pathways add adventure in wooded yards.*

**Adventure Pathways** create opportunities for repeated exploration and adventure, even in relatively small yards. Pathways can be simple: a footpath around the edge of the site sneaking around trees and bushy plants. Complexity can be added with logs, stumps, rocks, stepping stones, and other obstacles to balance, jump or clamber around. A looped pathway is more enticing. To a child it feels like it leads to a secret place.

In larger sites, other settings along the path increase the sense of adventure and mystery. Settings such as backyard habitat, gathering places, grass mazes or fairy villages work well along a pathway.



*Logs and stones can add challenges along the pathway.*

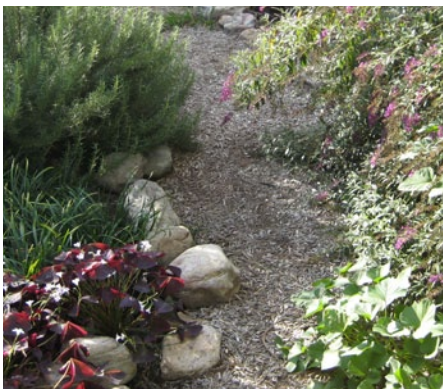
## Materials:

- Pathway surfacing, such as mulch, or stepping stones
- Destinations and diverse materials, such as balance logs or boulders

**1.** Layout pathway in a loop.

**2.** Create play opportunities “along the way.”

**3.** Add diverse ground surfaces and plants to increase interest.



*Paths meandering through plantings add a sense of mystery.*



*Moveable tree cookies stimulate children to create their own adventure pathways.*

# Multipurpose Lawn



Colorful planted buffers give a sense of enclosure to lawns, which do not need to be large to have plenty of room for free-form play.

**Multipurpose Lawns** might be easy to overlook because of their ubiquitous presence in yards across the country. However it is important to remember the benefits of a thick, healthy turf area selected to thrive in your growing region and shade conditions. Small multipurpose lawns have many uses including group games, dramatic play, story time or as a soft place to lay immersed in the perfume of the grass while watching clouds drift across the sky.

Lawns need not be expansive to be beneficial, even a small 100 square foot circle or square provides many play opportunities. Lawns work well as a central space bordered by settings, a pathway, diverse plantings, and trees. Consider the lawn as a small piece of a home landscape designed for nature and play, rather than as a complete yard on its own.

## Materials

- Sunny, relatively flat patch of ground
- Soil amendments, such as compost
- Sod (for best results)

1. Choose a spot that receives at least 5 hours of sunlight a day.
2. Prepare the existing soil by loosening the top couple of inches and adding compost or other organic material. Rake smooth and remove large stones.
3. Install sod for best results, and water as recommended to establish.

# Play in All Weather

**Rain, snow, summer heat...** all of these weather conditions affect getting your kids outside. Rather than staying indoors, find ways to get your family outdoors in all seasons and in all weather. Here are some tips and ideas for all-weather nature play.

**Spring** – April showers are the perfect opportunity for putting on rain coats and galoshes, grabbing an umbrella, and heading outside for puddle-jumping.

**Summer** – Beating the heat is as simple as hooking up the garden hose and letting kids take aim at each other. Or head into a shady section of the yard for a midsummer mini “hike.” Challenge kids to identify insects, birds, and plants they see along the way.



*Collecting water in the rain for “soup.”*



*Colorful, dropping leaves offer new, boisterous play opportunities in the crisp, autumn air – right in your own yard.*



*Snow play can be more than just sleds and snowmen. With enough layers to stay warm, all kinds of magic snowscapes can be created.*

**Fall** – Almost nothing is better than the simple pleasure of jumping in a freshly-raked pile of leaves! Have your kids figure out which leaves belong to which trees.

**Winter** – Layer up with weather-appropriate clothing and get kids outside for some winter play. If there’s no snow where you live, kids can experiment with freezing water in various containers overnight. Winter is also a time to observe birds at your bird feeder!

*“There is no bad weather, only bad clothing.”*

– Sir Ranulph Fiennes

# Balancing Logs



Stationary balance logs invite children to playfully engage in the world around them as they grow and develop.

**Balancing Logs** are as simple as they sound: a single sawn log or grouping of various sizes, which provide a natural alternative to fixed, manufactured play structures for climbing, scrambling, and balancing activities. Logs can also double as seating, a structure for natural construction or an insect habitat (carefully roll them and look underneath). In smaller yards or patios thin slices of logs (“tree cookies”), serve as stepping stones or loose parts.

Hardwoods such as red cedar or oak work well because they last longer. However, all logs need to be replaced every few years.

## Materials

- Hardwood stumps or logs such as oak, locust or cedar
- Sizes ranging from small stumps to larger fallen trees
- Smaller, stepping stone size “tree cookies” are an alternative to larger logs

**1.** Based on the amount of space, install stumps or logs in the ground and check for stability.

**2.** Check regularly for safety.



Moveable logs and stumps offer many play opportunities like balancing, as well as building, pulling, and rolling.





# Sand Play



*Sand play in this yard is nicely bounded with stumps and plants to provide play props.*



*More formal sand play with decking.*

**Sand Play** can be enclosed with logs or rocks. Use low-silica play sand, which is safe and offers countless play and learning opportunities to children.

Sand play exercises fine motor skills as children mold, pat, sift, stir, and dig in sand. Imaginative play abounds, as sand magically becomes ‘cake’ when pressed into an old metal pan or transforms into a mountainous obstacle course for insects and earthworms.

## Materials

- Horizontal edging (timber, composite lumber, masonry stones or boulders) to contain sand
- 18” of play sand for optimum digging
- Fine mesh cover to keep sand clean when not in use
- Pails, shovels, natural loose parts

1. Choose a well-drained, preferably shady, area to locate the sand play area.
2. Regardless of size, sand play needs to be contained with edging elements (logs, rocks, decking, etc.).
3. Provide shovels and pails for digging and building.
4. Cover the sand with a breathable mesh when not in use.

# Vine Teepee



Beans are growing on this vine teepee.



A teepee and sunflowers embellish this adventure pathway.

**Vine Teepees** are structures of six poles, six to eight feet long, made of bamboo, sturdy branches, or painted PVC. The poles are secured at the top and covered with climbing vines. Teepees create mysterious, natural, private, child-sized spaces.

For more detailed instructions, see the NLI Info Sheet “*Creating a Vine Teepee*” (refer to resources section at the end of this guide).

## Materials

- Bamboo or painted PVC poles
- Zip ties
- Step ladder
- Sitting rocks or logs
- Vines to plant around the perimeter (try edible vines such as squash or beans)
- Twine and sticks for cross-pieces

**1.** Find a location for a circle at least 6 feet in diameter.

**2.** Gather bamboo or other rod-like materials.

**3.** Use 4 poles tied together, then add more poles to stabilize.

**4.** Add cross-pieces of twine and sticks for the vines to climb.

**5.** Plant climbing vines around the base and train them up the teepee.



Fabric decorates this teepee in cooler months before the vines grow over it.

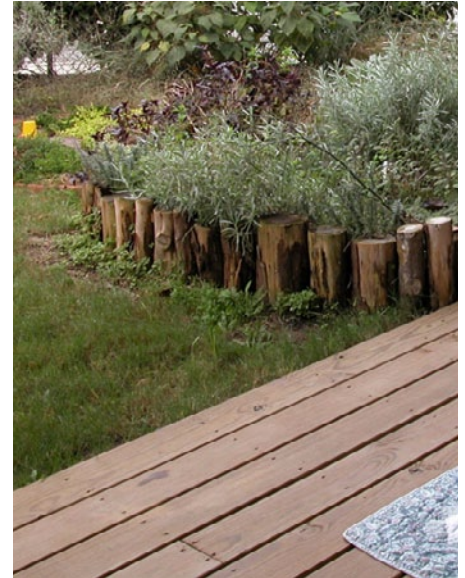


Small seating areas provide a perfect hideaway inside teepees.

# Play Deck



*A stepping stone pathway leads to a small play deck in the corner of this space with recently installed plants.*



*Play decks work well adjacent to multipurpose lawns and contemplative settings such as sensory gardens.*

**Play Decks** serve multiple activities by providing flat, dry, raised surfaces, which support opportunities for dramatic play (used like a stage), work surfaces for projects, places to sit or lay on a blanket, and much more. Decks are natural gathering places for children and neighborhood friends.

Play decks differ from a regular deck because they are usually free-standing or built against a fence, not attached to the house. Play decks can be much smaller than an attached deck, such as the octagonal deck illustrated above, and they are low, within six to twelve inches off the ground. Consider using a play deck to cover a drain or catch basin to turn it into a usable space (still allowing access if needed).

## Materials:

- Lumber
- Hardware
- Table saw
- Concrete mix

- 1.** Assess your space and decide the best location for your play deck.
- 2.** Determine the size and shape.
- 3.** Consult a professional for construction assistance, if necessary.

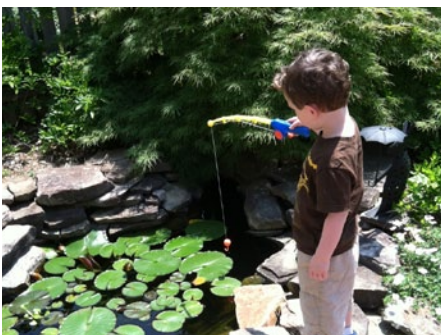
# Water Garden



*Water gardens create habitat for many beneficial wildlife species.*



*A diverse array of aquatic plants can be grown in water gardens.*



*Children are fascinated by water gardens and the creatures who might live there.*

**Water Gardens** have the unique ability to create a more natural atmosphere in outdoor play and learning spaces. The presence of water attracts a diverse array of wildlife such as dragonflies, lizards, frogs, toads, and certain types of birds that might not otherwise find your yard. Early morning visits to the pond can be a daily adventure of discovery for little ones, with something new to learn every day.

The size of water gardens can vary to suit individual needs. They fit almost any size of yard or patio. Even a small balcony can include a fountain in a sealed flower pot. Larger gardens might have room for ponds with different depths for growing aquatic plants.

Water gardens of all sizes require more supervision and maintenance than most of the settings in this guide. Consider ongoing upkeep and safety concerns when deciding whether or not a water garden can work for you.

## Materials

- Water
- Container for the water (anything from small lined pot to a larger pond with liner)
- Aquatic plants
- Stones, for edging
- Fish, if desired
- Insect life will magically appear after a few weeks

**1.** Decide the size of your water garden.

**2.** Consult books and online resources about how to install and care for a water garden or consult an expert.

**3.** Plan for water garden supervision and maintenance.

# Places for People Big and Small

**Time outdoors** is an important part of staying active and healthy, but nature also offers quiet places for refuge and the opportunities for reflection and relaxation – essential activities in today’s fast-paced society. Secret hiding places and ‘green’ spaces where children feel enclosed and surrounded by nature provide them with a sense of confidence being outdoors. Older children and adults will more likely spend time outdoors if there are comfortable spaces to gather and socialize. Here are some ideas for getting the whole family outside:



*A secret spot surrounded by plantings is just the right size for quiet imaginative play in nature.*



*A fast growing edible, Malabar spinach (*Basella rubra*), is used to cover this tunnel made from curved lengths of aluminum conduit and garden netting.*

**Green tunnels** can be created out of curved lengths of aluminum conduit, providing an armature for vines to grow on, making the tunnel a magical place for children to explore. Deciduous vines create a cool, shady summer hideaway. Edible vines, such as cucumbers, beans, and gourds can also be trained to cover tunnels.



*Groups of hammocks hung between fruit trees and a wooden post provide an inter-generational place for relaxation and quiet enjoyment.*



*A swing suspended from a pergola.*

**Hammocks** are a great way to provide children with enjoyable vestibular stimulation that swinging provides, but without the space requirements of a traditional swing set.

## Places for People Big and Small



*Blocks of wood and logs create a simple intergenerational gathering place.*



*Outdoor furniture invites both children and adults to a comfortable spot where everyone will spend more time together.*

**Gathering places** support social interactions and cooperation between generations. As extensions of indoor areas, hammocks, stumps, large rocks, tables and chairs provide settings for story-telling, drawing, painting, sharing conversations about the day or a place for enjoying ‘doing nothing.’

### **Small groupings of trees and shrubs**

Massings of shrubs create special places for children. Choose plants with interesting leaves, nuts, or berries that will afford even more opportunities for diverse play. Children can assist in creating their own special place by ‘weaving’ vines or shaping plants to form personalized individual or group spaces.



*These mature shrubs have been pruned to provide a space for children to gather. Lengths of airy fabric woven through the limbs create a magical atmosphere.*

## Small Space Solutions



*Natural loose parts play can happen anywhere.*

**Natural Loose Parts** is one of the easiest settings to incorporate into a small scale space. A collection of natural, seasonal materials, a play surface, and a place to store them is all you need. While great on its own, natural loose parts provide even more imaginative play opportunities in combination with other small-scale manufactured items. Try bins of different small materials, perfect for sorting, manipulating, and creative play.

**Natural Construction** using loose parts can still happen in a small space but may need to take on a more ephemeral quality. An afternoon of fort building on the balcony can be a special recurring play event, easy to take down when necessary. Sticks, fabric, string, and leaves can be reused and recycled as needed.



*Natural construction materials are ready for use in this small corner of the yard.*



*Earth play can be just as engaging on a balcony as in a yard.*

**Water Play** is easily incorporated into any size of space. Kids take delight in almost any form of water play, especially in hot weather. Buckets, plastic storage containers, and small kiddie pools can be combined with cups, bowls, and scoops for stationary water play. Try squirt bottles, sponges, or paint brushes with a bucket of water for kids to “paint” exterior walls.

**Earth and Mud Play** need not be limited by the size of your space. A large tub filled with soil and scoops on a porch or balcony is just the right scale for young children to dig in. Add water and a few more containers, and a fantastic mud play setting is available with mixing, pouring, squishing, and more!

## Small Space Solutions

**Acoustic Play**, at its simplest, can be created with any sort of noise and music-making instrument stationed outdoors. Porch rails and walls work well for mounted instruments or noisemakers (like chimes). Portable outdoor noisemakers (drums, pans, or whistles) can be stored in a container or under a bench, ready to use when inspiration strikes.

**Sensory Gardens** are simple to create even in limited places. Herbs are well suited to growing in pots with less-than-ideal sunlight exposure. Try planting herbs along with textural plants like fine grasses, mosses or lamb's ears. Arrange the pots near a gathering place and at a child's height, as this will enable sensory exploration and enjoyment.



*Fairy villages can be scaled to fit any outdoor space.*

**Fairy Villages** by nature are well suited for smaller spaces. Fairies, gnomes, (even dragons) require more imagination than they do space. A planter with fine-textured plants and moveable natural fairy house materials will fit nicely on a patio. Even a low bench or stump can become the surface for a fairy landscape with a few small materials and lots of imagination.

**Backyard Habitats**, while more limited on a balcony or small yard, are still achievable. A simple bird feeder or birdhouse (or butterfly or bat house) can increase wildlife sightings, wherever you live. A small yard can accommodate a bird bath, and with a few potted shrubs or fruit trees a much improved natural space will attract wildlife, adding shared interest for children, parents, and other adults.



*Children love to help with yard projects, here constructing and decorating bird houses for habitat.*



## Small Space Solutions

**Edible Plants** need sun, water, and soil. Small spaces may be limited in their ability to provide enough sun. By using pots or planters soil quality can be controlled and space maximized. Keep an eye on your space throughout the day to find the area that receives the most sun, and place edible plants in those areas as much as possible. Herbs, greens, vegetables, even some dwarf fruit shrubs and trees can thrive in containers and small gardens.

**Sand Play**, similar to earth and mud play, is easily adapted to containers for play in small spaces. A broad container set on a bench serves as a portable sand table. A larger container set on the ground surface could be big enough for little ones to sit inside. Mix in a little water and scoops and it's like a day at the beach, all on your own patio.



*This vine teepee offers a pleasant shady corner on a deck.*



*Many edible plants thrive in containers, like these hot peppers.*



*Sand play for young children need not be large. Logs and toys add play value by offering opportunities to manipulate the sand.*

**Vine Teepees**, with a little creativity, can be adapted to decks, patios, and certainly small yards. Even without a patch of earth, teepees can be set up seasonally on the porch or patio with vines planted in containers around the outside. Swaths of fabric create shade and colorful hiding places in the winter or before vines have matured



## Closing Thoughts

Every family has the opportunity to invite nature to their daily life, to “pull” children outdoors where they can exercise bodies and minds and gain lifelong habits of health. At the same time, creative nature play helps children learn about the fascinating living systems of planet Earth. Research tells us this is good for building character, reinforcing self-esteem, and learning cooperative skills with those around. Edith Cobb’s analysis of biographies of well-known creative individuals in science and the arts found a common thread of genius – childhood freedom in nature.

Regardless of the location of your home (urban, suburban, rural) or its size (apartment, condo, detached house), there will always be opportunities for your children to interact with the natural world. It just takes a little imagination.

So... open the door, allow your children to breathe the fresh air, listen to the bird song, and be with nature.



# Additional Resources

## Online Resources

### Websites

Nature Play at Home – [www.natureplayspace.org](http://www.natureplayspace.org)

National Wildlife Federation – [www.nwf.org](http://www.nwf.org)

Be Out There – [www.BeOutThere.org](http://www.BeOutThere.org)

Garden for Wildlife – [www.nwf.org/gardenforwildlife](http://www.nwf.org/gardenforwildlife)

Certify your Wildlife Garden – [www.nwf.org/certifyyourgarden](http://www.nwf.org/certifyyourgarden)

The Dirt on Dirt Report – [www.nwf.org/dirtreport](http://www.nwf.org/dirtreport)

Natural Learning Initiative – [www.naturalearning.org](http://www.naturalearning.org)

Green Desk – [www.naturalearning.org/greendesk](http://www.naturalearning.org/greendesk)

Grass Maze Green Desk post – [www.naturalearning.org/content/grass-mazes](http://www.naturalearning.org/content/grass-mazes)

Vine Teepee Info Sheet – [www.naturalearning.org/content/creating-vine-teepee](http://www.naturalearning.org/content/creating-vine-teepee)

Children & Nature Network – [www.childrenandnature.org](http://www.childrenandnature.org)

Children & Nature Network research abstracts – [www.childrenandnature.org/research](http://www.childrenandnature.org/research)

### Blogs

Active Kids Club – [www.activekidsclub.com](http://www.activekidsclub.com)

Go Explore Nature – [www.goexplorenature.com](http://www.goexplorenature.com)

Let the Children Play – [progressiveearlychildhoodeducation.blogspot.com](http://progressiveearlychildhoodeducation.blogspot.com)

Little Eco Footprints - [www.littleecofootprints.com](http://www.littleecofootprints.com)

Love Sown – [www.lovesown.com](http://www.lovesown.com)

Our Days are Just Filled – [www.ourdaysarejustfilled.com](http://www.ourdaysarejustfilled.com)

Outside with Marghanita – [www.marghanita.com/blog](http://www.marghanita.com/blog)

Play Outside! – [theplayfiles.blogspot.com.au](http://theplayfiles.blogspot.com.au)

Playborhood – [www.playborhood.com/blog](http://www.playborhood.com/blog)

The Grass Stain Guru – [grasstainguru.com](http://grasstainguru.com)

## Published resources

### Books about children's gardens

- A Child's Garden: 60 Ideas to Make Any Garden Come Alive for Children*, by Molly Dannenmaier (Archetype Press Books)
- At Home With Nature: Creating Nature Explore Playscapes for Families*, by Dimensions Educational Research Foundation (Arbor Day Foundation)
- Bringing Nature Home: How You Can Sustain Wildlife with Native Plants*, Updated and Expanded, by Douglas W. Tallamy (Timber Press)
- Creating a Family Garden: Magical Outdoor Spaces for All Ages*, by Bunny Guinness (Abbeville Press Publishers)
- Nature's Playground: Activities, Crafts, and Games to Encourage Children to Get Outdoors*, by Fiona Danks and Jo Schofield (Chicago Review Press)
- Sunflower Houses: Inspiration from the Garden - A Book for Children and Their Grown-Ups*, by Sharon Lovejoy (Interweave Press)

### Children's Literature

- Eating the Alphabet*, by Lois Ehlert (Sandpiper)
- Whose Garden is it?* by Mary Ann Hoberman (Gulliver Books)

### Gardening with kids – curriculum

- Early Sprouts*, by Karrie Kalich, Dottie Bauer & Deirdre McPartlin (Redleaf Press)
- Sowing the Seeds of Wonder* – Discovering the garden in early childhood education, by Life Lab (National Gardening Association)
- The Budding Gardener*, by Mary B. Rein (Gryphon House, Inc.)

### Technical gardening

- Edible Landscaping*, by Rosalind Creasy (Sierra Club Books)
- Grow it Cook it*, edited by Jill Bloomfield (DK Publishing)
- Growing Fruit*, by Alan Buckingham (DK Publishing)
- Grow Vegetables*, by Alan Buckingham and Jo Whittingham (DK Publishing)
- Perennial Vegetables*, by Eric Toensmeier (Chelsea Green Publishing)
- The Complete Compost Gardening Guide*, by Barbara Pleasant & Deborah Martin (Storey Publishing)
- The Vegetable Gardener's Container Bible*, by Edward Smith (Storey Publishing)
- Week-by-Week Vegetable Gardener's Handbook*, by Ron Kujawski & Jennifer Kujawski (Storey Publishing)
- Worms Eat My Garbage: How to Set Up and Maintain a Worm Composting System*, by Mary Appelhof (Flower Press)

