



Design Principles for Nature Play Spaces in Nature Centers and Other Natural Areas

In recent years the conservation field has come to understand that children's unstructured, nature-based play is a powerful influence on the development of life-long conservation values — especially when such "nature play" occurs frequently. Simultaneously, research has clearly shown that such frequent, spontaneous outdoor play has largely vanished from American culture.

The convergence of these factors is leading many nature centers and other conservation groups to make concerted efforts to restore nature play to childhood. To date, one of the most common strategies for these efforts is the creation of specific areas for nature play — either by designating existing habitat for that role, by creating sometimes-elaborate "nature playgrounds," or through a combination of the two.

Green Hearts believes this is a valuable effort, but we think conservationists are still several years away from having a well-tuned set of best practices for the creation of nature play spaces *that are effective in bonding children to the natural world*. Many nature playground efforts are underway across the country — some truly unique, while others are proliferating in more of a "cookie-cutter" format. As we have observed and analyzed many of these spaces, and helped design others, Green Hearts has begun developing a set of principles and practices to guide our work. These are *not* scientifically proven, absolute, or etched in stone. Rather, they represent Green Hearts' best judgment and analysis, based on our experience. We share them here to help our conservation colleagues to similarly think through core principles and key design issues for spaces intended to recreate the wonderful, nature-based play that so many of us enjoyed during our youth.

Part 1: Core Principles

- ♥ **Trust in the inherent play value of nature.** In truth, *the best places for nature play have already been designed by nature*: rich, healthy, diverse, natural habitats that are accessible to children. If your site has such areas, first consider their potential for supporting children's play without major physical changes or enhancements.
- ♥ **Mimic nature closely.** If you intend to design or significantly augment a site for nature play, choose designs that are close replicas of local habitats. *Aim to create a natural area for play, not a playground with a nature theme*. In designing the space, try to create a "density of diversity": habitats and micro-habitats that are situated in close proximity to each other. This diversity will add both ecological richness and play value. Always look first to use plants and features (e.g., rocks) that are native to your area. Alternatively, carefully choose only those non-native plants that are ecologically well-adapted to your region and are not invasive.

Core Principles, *continued*:

- ♥ **Focus on conservation outcomes.** Frequent nature-based play is good for a broad range of children's developmental needs — a fact to be celebrated and shared with your visitors and members. However, environmental organizations should emphasize, first and foremost, that children's nature play is a *powerful conservation strategy* intended to help create a larger, stronger future constituency for the environment. Nature centers' missions are different from child development centers or schools, even though their benefits can overlap. Use and promote nature play as a vital part of your conservation commitment!
- ♥ **The heart comes first.** Nature play is not about learning, and it is not just a "tweaking" of traditional environmental education methods. Nature play is about kids falling in love with nature — and falling in love is not a left-brain process! All nature play will inevitably involve learning, but it will be spontaneous and unpredictable — not the kind of learning that fits neatly into curriculum standards and grade levels. By contrast, structured, school-based environmental learning does not necessarily engage the heart. It is often too infrequent, too indoor, too controlled, and/or too objective-based to allow the creation of deep, individual bonds with nature. *So aim for the heart* with your nature play initiative. If kids fall in love with nature, they will *want* to learn about it, and that learning will be likely to endure. In the words of John Burroughs, "Knowledge without love will not stick. But if loves comes first, knowledge is sure to follow."
- ♥ **Play *with* nature, not just *in* nature.** Not all outdoor play is created equal. Many forms of outdoor play will support children's developmental needs without creating strong bonds between the kids and nature. For example, outdoor play with a frisbee is a great activity for young kids, but it involves nature in only the most passive of ways. Some nature play area designs promote the outdoor use of both simple and elaborate activity stations that could just as well be played with inside. This is *outdoor* play, not *nature* play! Real nature play actively engages kids *with* nature: catching fireflies and tadpoles, digging holes to China, building their own den, climbing trees, finding mini-beasties under rocks, collecting leaves, curling up in a secret niche to watch the clouds, etc. Every major activity in your nature play area should facilitate *authentic* interactions with real nature.
- ♥ **Frequency is vital.** Children who visit a "destination" nature play area once or twice a year *may* have a transformational experience, and they certainly will have fun! But deep and lasting impacts on a child's emerging conservation values are much more likely to arise from *frequent* nature play. The goal is to create a powerful personal relationship with the outdoors, and like all strong relationships this is best achieved through frequent, intimate experiences. Daily or weekly play in an unspectacular but readily available outdoor area — even just an overgrown vacant lot — will be more powerful than an annual visit to a rich, wonderful nature play site. Think of it as analogous to physical fitness: you can go to the right place (a gym, for instance) and do all the right activities (exercises), but it will do you little good unless you do so on a regular basis. Ditto for nature play.
- ♥ **Provide a "take-out menu."** Unfortunately, nature centers and other natural areas do not normally have the same children visiting their nature play spaces on a daily or weekly basis — so the benefits of frequency will be hard to attain. As an alternative, strive to provide parents with the information and ideas they need to give their children frequent nature play in or near their home. Supply parents with written guides or concise instructions for easy "kidscaping" improvements that they can create in their home landscape, or that might be developed on their local school ground (e.g., *Green Hearts' A Parents' Guide to Nature Play*). And be sure that many of the features in your nature play site are replicable on a personal scale, both in design and cost.

Core Principles, *continued*:

- ♥ **Don't fear the reaper.** Active, engaging nature play will cause damage or even death to some organisms. Plants will be uprooted, tree limbs will be broken off, butterflies will be caught and injured, ants will be fried with magnifiers, foxes will be scared away from potential den sites, etc. So what? These are not actions that will threaten the world's ecology. In fact, they will probably cause less cumulative ecological harm than did the creation of your building site, parking lot, entry road, and trails. They will *certainly* do less harm in a year than a bulldozer does in ten minutes of ground work for that new superstore down the road. Realize that these kinds of kid-caused damage to nature are an inherent part of nature play — and that nature play is a vital conservation strategy. Also realize that most such harm is not evil in intent, but rather is more akin to children performing simple, spontaneous science experiments. Kids need to learn how much impact they can have on other life forms, pro and con. Green Hearts believes that this is a common part of the process of developing personal empathy for other life forms. Don't encourage it, but don't worry about it too much, either.

- ♥ **Chill out.** Virtually all nature centers have the same rules: don't go off the trails, don't pick or collect anything, don't run, don't climb trees, don't throw rocks in the pond, don't catch animals, don't dig any holes, don't walk in the creek, etc., etc. Yet when you ask nature center staff what experiences steered them into this profession, these are exactly the kinds of activities they will commonly recall! So give some thought to whether your visitor rules are truly effective. Do they protect your land in the short term, but unintentionally discourage the development of lasting conservation values in local children — and if so, are they really successful? Obviously, some nature centers have environmentally sensitive areas that truly need strong protection from all visitors, but many nature center sites are not so unique. Often the ecological value of their land is only as a remnant of what used to be in the area, rather than as a reservoir for legitimately endangered species or habitats. Consider carefully if there isn't room to relax your rules — perhaps even by "zoning" your property for different levels of impact. After all, as conservationists our strategies should promote ecological protection over the course of centuries or millennia — and that can only happen if we succeed in instilling conservation as a primary core value of our culture. That is the purpose of re-created nature play!

- ♥ **Room to roam.** As children grow older — say, from about age nine or ten up — they often seek more challenge and adventure. Historically, a major reflection of this was outdoor roaming: following streams, trails, roads (perhaps via bike), and boundaries farther and farther away from their home. These adventures not only deepened kids' knowledge and relationship with nature, but also served to create a stronger sense of place. (For a great example of this type of roaming and its power, read Robert Michael Pyle's *The Thunder Tree*.) Most nature play spaces do not provide for this stage of outdoor play, and thus they are often most effective only for younger children. So consider how you can facilitate roaming for older kids — perhaps by relaxing your rules (per above) or by scattering nature play features throughout a larger portion of your property. Can you think of other ways to support roaming?

- ♥ **The test of remembered childhoods.** Among conservation professionals, the experience of childhood nature play is nearly ubiquitous. Presuming that you are not the exception, draw on your own memories as you design places for today's children to play with nature. Clearly, some things have changed and can't be brought into the 21st century, but many of your memories are still powerful and meaningful. Use them to edit the kinds of activities you are trying to create at your site. For example, do you remember having delineated and signed areas for different types of

Core Principles, *continued*:

outdoor play (e.g., “messy play,” or “dramatic play”)? Or \$5,000 play houses? Or very expensive outdoor musical instruments? *Not likely*. So don't feel that those sorts of things will be essential to today's kids, either! Think of the nature play activities that you remember most vividly — the ones that really sparked your love of the outdoors — and try to re-create them in your center's nature play space.

- ♥ **Embrace risk, *thoughtfully***. This is a tough one. We live in a litigious society, and many environmental centers view lawyers and insurance agents as near kin to Darth Vader. Intentionally created nature play — and places for nature play — are new concepts for nature centers and insurance companies alike. There is little if any real data about how safe or dangerous they are, but there is plenty of room for common sense — *and you should be the champion of it!*

One of the keys to this is the concept of comparative risk. For instance, many natural areas have deep and potentially dangerous water bodies, open to visitors and lacking six-foot safety fences — even though drowning is the second most common cause of accidental children's death. Yet typically a nature center's staff (and their insurance agents) accept this fatal danger, while worrying obsessively over the possibility of a child breaking an arm by falling out of a tree, or getting the occasional cut, scrape, or bruise through active outdoor play. In fact, the number one cause of children's accidental death is automobiles — i.e., the way 99% of your visitors arrive at your site! Are you creating a deadly attractive nuisance by encouraging families and school groups to drive to your center? Common sense is crucially needed in these considerations!

Truth is, dealing with risk is an essential part of child development. Kids must learn to judge risks, gauge their own physical limits, and practice personal responsibility. Until very late in the 20th century, every generation of children in history had done just that, in large part by jumping over creeks, balancing on logs, climbing trees, scrambling over boulders, and poking into holes. Yes, there is inherent danger in those kinds of activities, and injuries will occur — but do you really think they will be any more severe or common than what your visitors experience in other areas and activities within your property?

None of us should blithely ignore dangers or be unconcerned with risk, but we need to lower the fear factor, not raise it. Talk candidly about comparative nature play risks with your staff, your Board, your insurance agent, your visitors, and your members. Educate them about it, and appeal to their common sense. Liability laws and insurance company practices are not writ on stone tablets carried down from a mountaintop; they can be changed by an informed and motivated public. Do your part in that process, and don't let irrational fear control your design work. As landscape designer Robin Moore has said, you should aim to make your nature play site as safe as it *needs* to be, not as safe as it possibly *can* be.

- ♥ **Throw away the clock**. Nature play is at its best when it's unstructured and unregulated, so give kids as much time as possible to explore and play in your nature play area. Work plenty of free time into your camps and weekend programs for kids, and trust in the children's ability to make up play amidst a rich environment. And if drop-in visitors use your play area, be sure to make the parents comfortable. It is not at all essential for parents to play alongside their children; in fact, it may be better if they don't (though do not try to mandate that!). Studies have shown that the biggest determinant in how long young kids are allowed to play in a playground setting (generically) is how comfortable their parents are. So provide comfy seating, plenty of shade, water (or sodas and snacks), and perhaps even wireless internet for parents' use — all within watching distance of your play area. Also, be sure to use the “parents' lounge” space(s) as a great location for educational signage or printed material about the value of nature play, and how they can facilitate it at home.

Core Principles, *continued*:

- ♥ **Schools don't cut it.** Nature play is rarely a good fit with visiting school groups. It is nice to dream of a day when school classes might visit nature centers every week just to give their students two or three hours to muck around in the woods. It would be good for the kids' health, almost certainly good for their education, and good for conservation — but don't expect it to happen in our lifetimes! It is certainly possible for school classes to enjoy your nature play space before or after a structured program, but time constraints, worries about clean clothing, and teachers' inclinations towards control are often barriers to high quality nature play during those visits. And although many well-intentioned environmental educators are trying to directly integrate nature play into their structured programs, the results are usually a weak compromise, at best. Nature play and standards-driven learning are just simply different beasts. Green Hearts believes that nature play is best done during kids' free time, not during school. After all, how many of you remember your childhood nature play as occurring during school hours? *Right*. So why try to make it so, today?

- ♥ **Sssshhh — child at play!** Amidst the active, boisterous fun of much nature play, it is sometimes easy to overlook the value and importance of quiet play and more contemplative activities. Green Hearts believes that secluded little niches and retreats for kids are just as important to a quality nature play area as are more vigorous pursuits and features. Kids need the time, the shelter, the comfort, and the privacy to daydream, to watch birds and butterflies, to have an intimate chat with their best friend, and to listen to the wind in the leaves. These experiences have always been a part of nature play, and should be included in any designed natural play space.

Part 2: Design Elements and Guidelines

Green Hearts offers the preceding Core Principles as broad, over-arching concepts that can be applicable to virtually any nature play space being created within the context of a nature center or other land-based environmental facility. What follows below are somewhat more specific suggestions — generally more logistical and less philosophical. None of them will be applicable for every situation, nor is this even remotely close to an exhaustive list of possibilities and concerns. However, again we offer them in the hope that they will be valuable to our colleagues.

- ♥ **Site Right.** To maximize the natural value of a nature play site and take best advantage of your existing land, try to integrate the space into and with existing habitat, rather than creating a "stand alone" playground from scratch. When possible, use existing logs and boulders for balance and climbing areas, keep a downed tree as another climbing option, take advantage of natural topography, open up a safe access point to an existing shallow stream, etc. And if you *are* able to use existing habitat as your play area (without too much augmentation), consider whether you could move the play site annually among three or more locations by using portable fencing or other flexible boundary markers. This would give each year's site at least a couple of growing seasons to recover from any damage inflicted, before again being heavily used.

Be sure to choose a site that is easy for visitors to reach, not too deep into your property, and near a main trail but not bisected by it. Drinking water and restrooms should also be nearby, and it's best to allow for future vehicle access in order to replenish mulch, replace worn logs, and help with other heavy maintenance work.

Design Elements and Guidelines, *continued*

- ♥ **Accessibility.** Provide all-persons access to a representative sample of play opportunities, but realize that full access is probably not going to be possible for these sorts of activities. Nevertheless, seek out local experts and advocates who can help you to make your site as realistically accessible as it can be, without turning it into something too similar to a commercial playground.
- ♥ **Don't Over-design.** Your design should be based on a realistic but not inflated expectation of visitor usage. Really heavy use will require more hard-surfaced paths and probably more artificial features — things that dramatically raise costs and are semi-permanent. Thus, Green Hearts suggests you develop an initial plan that is designed to serve the lower end of your usage expectations, but with allowance for modifications and expansion if actual use proves it is needed.
- ♥ **Separate but Equal.** If you are constrained by available space and your site's play features are "packed in" rather close to each other, you can facilitate more intimacy and adventure by creating live internal "baffles" with tall grasses, shrub rows and clumps, or vine-covered fencing. Also, you can help encourage different types of play through the design of these outdoor "rooms." For instance, a small clearing amidst a dense circle of shrubs, enhanced with a swinging bench, is perfect for quiet play. However, don't try to *dictate* the types of play for different areas — leave the creative choices up to the kids!
- ♥ **Keeping Secrets.** Kids love small, confined spaces where they feel protected and enclosed, but still have some outward view. Psychologists call this "prospect and refuge" — i.e., the safety and security of enclosure, with the advantage of visual range. Use things like natural dens, small clearings in tall grass, a shrub thicket (per above), or a giant hollow tree to provide these small, "secret" niches. Encourage kids to stay awhile by equipping some of the spaces with a hammock, a hammock chair, a rocker, a bench, etc.
- ♥ **If You Build It . . .** there's a good chance you're wasting money! Human-built structures have long been a part of nature play, often in the form of crude forts and shaky tree houses. These are still an appropriate addition to a nature play site, but don't go overboard by creating elaborate and spectacular structures. In fact, consider facilitating similar kinds of creative, dramatic play by using a cheap (i.e., sacrificial) tent, an old boat or canoe, a sunflower house, or a vine teepee. If you do opt for building a fancier structure, try to keep it naturalistic by avoiding the use of plastics and bright primary colors. And before you give in to temptation and begin the construction of a spectacular tree house or the installation of an expensive outdoor marimba, consider how much habitat enrichment and expansion you might be able to achieve for the same amount of money — with a resultant increase in both play value and wildlife value. (Green Hearts' favorite statement about landscape architecture for nature play is this: more landscape, less architecture!)
- ♥ **Loose Parts.** Speaking of structures, why not just let the kids build their own? This is the advantage of providing a good supply of "loose parts": materials that can be used and re-used in an endless variety of play experiences. Good possibilities are sturdy branches, tree "cookies," tarps and blankets, boards, large sheets of cardboard, boxes and crates, bricks and flagstone pavers, mud, etc. With materials like these, kids can design and build their own crude structures — providing far more play value than just using a structure that adults have built. And every day's young visitors can choose to either add-on to yesterday's structure, or tear it down and start over.

Design Elements and Guidelines, *continued*

- ♥ **Think Small.** A nature play space for you and your adult friends can be a 50,000-acre wilderness area, but for kids you have to think and plan on their scale! To best engage and excite young children, keep play area paths, structures, plantings, and challenges all significantly smaller than what you might normally envision for your typical visitors. It really doesn't take much to delight a five-year-old, to whose eyes the world is incalculably larger than it is to yours! More small delights will keep kids playing longer than fewer large-scale ones.

- ♥ **Getting High.** (No, not that — what's wrong with you?!) Children love to climb — for the actual climbing process, for the sense of accomplishment they get from reaching the top, and for the commanding view that high perches provide. In truth, those perches don't need to be more than four or six feet above the ground for younger children. Again, remember that their perspective is dramatically different than yours! Kids can enjoy climbing and height by running up grassy hills, scrambling up a pile of giant boulders, going limb-by-limb up a small but sturdy tree, crawling up a slanted climbing net, or even climbing up steep stairs or not-too-steep ladders. Whatever type of climbing feature you choose, this is one area where safety should trump naturalistic appearance: provide a deep, soft fall surface under and around the climbing apparatus. (Ask a local playground inspector for advice on fall surfaces, or refer to the U.S. Consumer Products Safety Commission publication, *Public Playground Safety Handbook*: www.cpsc.gov/cpsc/pub/pubs/325.pdf.)

- ♥ **The Sound of Music.** Children love to make music . . . or noise, depending on one's point of view. Playing simple musical instruments is a great thing for kids to do, developmentally. But is it a good fit with nature play? As a conservation organization, Green Hearts feels that the best, most appropriate music for nature play is the music of nature itself: birds singing, a gurgling stream, whispering pines, humming insects, raindrops in the leaves, or the soft rattle of a quaking aspen. All of these are quickly drowned out by the sounds of most human-built musical instruments. So rather than providing instruments, we recommend designing your space to feature natural sounds through the use of bird and insect gardens, thoughtful tree plantings, a rocky stream, plots of tall grasses, etc. And encourage children to actually hear and enjoy nature's music by locating quiet niches and secret spaces in or near these symphonic features.

- ♥ **Real Dirt, Real Simple.** Children also love to dig, and many don't get much opportunity to do so anymore. You may not want them to be shoveling away just anywhere on your property, though, so give them a place of their own! One option is to create a large, cleared digging pit on your site, with the soil loosened up a bit. This will let kids find worms, grubs, roots, rocks, and other great nature play treasures! Another option is to dump a giant mound of soil on your chosen spot — the bigger, the better! (The size of a free-standing, two-car garage will do nicely....) A digging pile like this may not contain as many natural history specimens (depending upon the source of the dirt), but it might be easier for younger children to handle.

- ♥ **Pond-ering Water Play.** "But a child can drown in just two inches of water!", you'll likely hear as soon as you raise the issue of water play. This is true; they can. They can also die from tripping over a root on your trails and hitting their head on a rock, by getting struck by lightning, by being stung by a bee, or by having a meteor fall on their noggin. Better just lock 'em up inside, eh?!
 Think for a moment of all the park ponds and lakes where families picnic and play, of all the ocean beaches swarming with children, of all the neighborhood drainage ditches just calling out to kids' playfulness, and so on. Playing in water within an intentional nature play area may be the safest option of them all! That said, water play still remains a tough nut to crack — both for the inevitable safety perceptions and for a biological challenge.

Design Elements and Guidelines, *continued*

The best-case scenario is to have a very shallow, rocky, *natural* stream flowing through your play area, with easy kids' access to its banks. If you can capture that in your play area, consider yourself very lucky! On the other end of the spectrum would be something like a raised, outdoor water table, even if it's made to look more natural with gunnite construction. The re-circulating water in such a contraption does let kids have real fun (and learn some science) by splashing, floating twigs and boats, and scooping and pouring water to their hearts' content. But they will find no dragonfly larvae under rocks, no amphibian egg masses, no giant water beetles, no turtles, and no water striders — nor can they just sit quietly and dangle their toes in the cool stream.

Somewhere between those two extremes lie the created-water-play options for most nature centers and similar organizations. Artificial water features are unlikely to capture the ecological richness of a natural stream, but they can approximate it while providing fine options for play. One good approach to this is to create a shallow (think inches) re-circulating stream — at ground level, twisting and turning, dropping slowly in elevation, and filled with cobble-sized rocks that can be easily manipulated by small hands. Add a few little, quiet pools (just three or four square feet, and no more than a foot deep), and such a stream should gradually support a limited but living ecosystem full of child-scale discoveries.

Within the context of something like a licensed nature preschool, such a re-circulating water feature would probably not be allowed by the license inspectors unless it included a very expensive biological filtration system to purify the water — an addition that would tend to work against the creation of a real living stream. If you are faced with such concerns, a lesser alternative is to create an intermittent stream physically similar to the one described above, but which kids can “turn on and off” via an old-fashioned hand pump or some form of a spring-loaded faucet. This may require two or more kids to work together (a good thing!), but if they first fill up a slow-draining reservoir at the stream's source, they'll then be able to play together in the running water. To avoid the re-circulation issue, such a stream could be allowed to drain into a small artificial wetland or a rain garden. Unfortunately, this type of intermittent stream will be largely devoid of natural aquatic life, other than the wetland or rain garden it can help support.

Shallow, rocky streams are perfect for play and are relatively safe, but deeper ponds don't fare so well on either count — though deeper water does open up new ecological dimensions. However, placing a pond that's deep enough for fish (several feet, typically) right next to a shallow play stream is sending a troublesome message: the youngest kids may not readily distinguish between the safe option and the dangerous one. So in general, deeper water features are not real good choices for nature play spaces. However, if you still want one, there are a couple of ways to make it safe. One is to mount a heavy metal or plastic grid just below the pond surface. This will need to be strong enough to hold children, tight enough not to trap heads, and anchored firmly all around the circumference of the pond — not a simple task! Another approach is to dig out a deep pond, and then uniformly backfill it with coarse gravel, to within a few inches of the water surface. This method will not allow fish life, but it will let emergent plants sink their roots deeply through the gravel, and will provide zillions of little niches for aquatic insects. Layer a finer (more barefoot-comfortable) gravel on top, and kids can walk right out into the pond, amidst the cattails, rushes, etc.

Of course, kids can also have great fun with just hoses, sprinklers, buckets, and rain barrels, but these water activities tend to be more “outdoor play” than “nature play.” There's nothing wrong with that, but Green Hearts does not think it's the optimal approach for a nature center or other natural site. So look carefully at the living stream play option. If you can afford the time and expense needed to create one, it will likely become a warm-weather focal point of your nature play space.

Design Elements and Guidelines, *continued*

- ♥ **Wonders of Wildlife.** A good nature play site should have a lot in common with an intentional wildlife habitat area. Extensive native plantings for food, shelter, and nesting should all be present or added, along with water sources that can range from a birdbath to a mud hole to a small marsh. Include nesting boxes, a brush pile, a toad house or two, an insect garden, and micro-habitats that are appropriate to your region — e.g., a stone wall or a sand pit.
- ♥ **Back to the Garden.** Or maybe not. Planting and tending a vegetable garden is a great experience for young children, but it requires long-term, on-going involvement. Thus, gardening is perfect for a preschool or a charter school. However, a vegetable garden doesn't offer so much for a one-time (or infrequent) visitor who won't have participated in its planting and care, and might not be respectful of all the gardening effort that's been expended on it. Instead, consider planting some "pick-able edibles" that visitors might enjoy during the right season, like grape vines, a large berry patch, or even a few semi-dwarf fruit trees.
- ♥ **The Grassy Knoll?** Turf grass is something of a biological desert, but it does have play value as an area for running, rolling, cloud gazing, or just resting. So consider including a bit of lawn in your nature play area, perhaps as an entry area that serves as a transition zone into wilder spaces. Use grass species that are hardy in your area and that require little maintenance beyond an occasional trim.
- ♥ **Tree Travelers.** Kids have been climbing trees for as long as there have been kids. So far our species has survived this calamitous threat to life and limb! The best climbing trees are large, mature shade trees with low, horizontal limbs — the kind that take many, many years to grow. So try to include one or more such existing trees when you decide on a location for your nature play zone. If you have one, you can consider giving kids a *little* boost up with an attached, sloped climbing net, or even wooden cleats firmly bolted into the trunk. But don't inadvertently encourage kids to try to go higher than what their best instincts are telling them, and be sure to install a good fall surface, as mentioned earlier.
 Also, one excellent climbing option is a large, sturdy, but fallen tree. Such a "sideways" tree typically offers multiple levels of climbing opportunities, since its once largely vertical main limbs are now largely horizontal. This lets children choose their own level of challenge and comfort, with room to "grow" on future visits. For any climbing tree, be sure to trim off and smooth any sharp projecting branches or branch remnants, and cut out any "V" traps in branches where children might get their heads or necks caught.
- ♥ **Library of Tools and Toys.** Be sure to supply your nature players with a selection of items they'll need! For instance, magnifiers, buckets, air and dip nets, small shovels and hoes, basic binoculars, bug houses, paper, watercolors and/or crayons, carry bags or pouches, etc. Also, keep some bug spray and sunscreen on hand for parents who have forgotten their own, and consider having a handy supply of used plastic bags or sheets of clean newsprint that parents can use to cover car seats when hauling home muddy, dirty, wet children! Also be sure to include a storage shed in your plans, so you can keep those tools and toys handy, and if you have a water line nearby, use it to install an outdoor faucet for cleaning them off after use. (You might also consider a low, shower-head type of wash-off station, for *really* muddy kids!)
- ♥ **The Point of Fencing.** Nature play spaces that are intended for young children are probably best defined and confined by some form of boundary: attractive fencing, natural features, or a combination of both. This obviously has safety value — keeping young kids from wandering off into

Design Elements and Guidelines, *continued*

areas that might be dangerous, or where they might be lost. Equally important, a firm boundary usually makes parents more comfortable, and more willing to let their children play spontaneously, without constant and near tending from Mom or Dad. In addition, enclosing a play area can also help communicate to children that this is *their* space, and they really can play in it as they like. The boundary creates a understandable division between "wild," protected land and the play zone, where children's behavior can be freer and more adventuresome.

If you do use any form of constructed fencing, make it as attractive and site-appropriate as possible. Wooden fencing covered with native vines (or screened with shrubs) can work well. Another good possibility is a rustic split-rail fence, backed with a wire grid fencing that's coated in green vinyl. In a natural setting, the green color makes the wire fencing tend to disappear to the eye, while still providing effective enclosure for munchkins. And while you're fencing in the really young nature players, try to remember and accommodate the roaming tendencies of older kids.

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