



One of the virtues of truly inclusive Universal Design is not only design for people of all abilities but also design for people of all ages.

## Inclusive and Natural

# FREE PLAY

## for Children & Adults

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Let's discuss ways that you can affordably incorporate free and safe play in your own yard or community. Let's not delve into the ADA so much as that mostly specifies getting into and around a playground, although the new standards greatly improve on the older version. Getting a child onto the playground doesn't necessarily enhance their play experience. Simple physical access also does not take into consideration children with sensory deficits and other developmental disorders. So I'd like to share with you some of the thoughts I arrived at while researching this article.

Last weekend, while I was playing in the garden, I realized that that was exactly what I was doing. Really, I'm just an adult playing in the dirt. When in the garden I am relaxed and generally not thinking about office work and other tasks that need to get done. It is a form of escape and assists me in the creative process. Often design ideas arrive to me when I detach from trying to solve them! This occurs often while playing in the garden or taking a river walk. In both cases I am relaxing and in a sense "getting back to nature."

So I was delighted to learn that there is a new trend toward natural play for children with the same end goal and that serves the same purpose – relaxing and connecting with nature. It then occurred to me, the similarities between inclusive play and inclusive gardening, and so why not combine the two? I am mostly thinking about in your own back yard here. Could there be a natural connection there?

After all one of the virtues of truly inclusive Universal Design is not only design for people of all abilities but also design for people of all ages. So why can't children and adults actually "play" together in the same environment? This could also encourage

multi-generational understanding and social growth. First, let's look at children and their ideas of play.

### FOR CHILDREN WITH SENSORY PROCESSING DISORDERS

Lucy Miller (founder of the SPD, Sensory Processing Disorder Foundation) states, "unfortunately children today are spending more time immersed in the 2-dimensional electronic world inside and less time exercising, moving their bodies and genuinely engaging in the world around them. This can mean less opportunities for their underlying neurological foundations to mature, and less chance that their higher brain centers will develop efficiently."

Today, at least 1 in 20, and perhaps as many as 1 in 6 children is affected by (SPD), a condition where sensory signals are effectively interrupted in the brain. This can lead to inappropriate responses such as aggression, hyperactivity, poor engagement and emotional distress that can upset daily routines and compromise a child's ability to learn and work with others. With so many children affected by SPD, it's essential that playgrounds do more to encourage healthy sensory development. A well-planned inclusive play area will not only entice kids back to outdoor play, but will also allow children of all abilities to develop the strong sensory and motor systems that are so vital for their futures."<sup>1</sup>

Children's "freeplay" is a concept that is complex and eludes an exact definition. But keep these ideas in mind, as we will look at the Principles of Universal Design in a bit. The idea of free play is play that is typically self-motivated, pleasurable, imaginative, non-goal oriented, spontaneous and active. *Freeplay* means removing adult rules and pre-determined notions of what a play area and its pre built features should be.



**GETTING BACK TO NATURE:** (Left) Children want and need to experience the entire natural outdoors that includes all of the above, not just sun and air that a playground with manufactured play equipment may offer. (Right) Children and adults can actually “play” together in the same environment, encouraging multi-generational understanding and social growth.

The entire being of the child is involved in genuine quality *freeplay*. This includes the child’s senses, emotion, gross motor, fine motor intellect, individual growth and social interaction.<sup>2</sup> Involvement of the entire being is important here, as this is different from simply being present at the play area.

For example, a playground that meets the minimum ADA requirements ensuring that a child using a wheelchair can reach the play equipment easily is not sufficient and does not come close to providing the opportunity for *freeplay*. The play area must be inclusive in the sense that children of multiple abilities can actually interact and play with each other with their whole being, not just play beside each other.

Universal Design (UD), then, is the framework for the design of environments and products, buildings and ideas with the goal that they be usable by the widest range of people with the widest range of abilities. These principles are:

- 1) *Equitable use*
- 2) *Flexibility in use*
- 3) *Simple and intuitive use*
- 4) *Perceptible information*
- 5) *Tolerance for error*
- 6) *Low physical effort*
- 7) *Size and space for approach and use*

I see these principles, if applied successfully to the built-environment, to be similar in the built-world as *freeplay* is in the imaginative world. That is, as stated above, self-motivated, pleasurable, imaginative, spontaneous and active.

### UD PLAY ENVIRONMENTS ARE FLEXIBLE

UD play environments function for people of all ages in much the same way *freeplay* play areas can work for children. They are a delight and are pleasurable to use and to live in. They are simple, intuitive and active, yet require low physical effort. They can be flexible in use and non-goal-oriented. They can be intuitive, that is, tantamount to perceptible information, as stated in UD principle 4. The point is universal design applied into a *freeplay* environment is an ideal and natural combination.

So, then, why natural and what are the benefits of the *natural* play environments for children? Research shows that if children were to design their own play areas, they would be filled with plants, trees, flowers, water, dirt, sand, mud animals and insects and would also include a wide variety of play opportunities of every type embodied within those natural elements. Children want and need to experience the entire natural outdoors that includes all of the above, not just sun and air that a playground with manufactured play equipment may

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offer.

Dozens of studies of outdoor experiences in natural areas and the wilderness show that natural environments produce positive physiological and psychological responses in humans, including reduced stress and a general feeling of well being.<sup>3</sup> Children have an intuitive connection with nature and that is demonstrated by the attraction they have with fairy tales in a natural setting and that are populated with animal characters. The *Shrek* movie series comes to mind as an



**RAISED SENSES:** (Left) The goal when designing outdoor environments for children is to use the landscape and vegetation as the play setting, and nature as much as possible as play materials. (Right) In a *freeplay* area, kids are encouraged to interact with the environment and yes, even get dirty!

example. More evidence is that more children and adults visit zoos and aquariums than attend major professional sports combined. The natural world is essential to the emotional health of children and early experiences with the natural world have been positively linked with imagination development and the sense of wonder.<sup>4</sup>

The natural setting and *freeplay* within it is a sensory activity. A sensory-rich inclusive play environment can bring children together while providing each one with the sensory experience they seek.

So the goal here when designing outdoor environments for children is to use the landscape and vegetation as the play setting, and nature as much as possible as play materials.<sup>5</sup> Things that children like in their outdoor environments resemble things that can be included in a garden area and consist of, but are not limited to: water, vegetation, animals, natural color diversity and change, places to sit in on and under and provide shade, nooks and crannies, to name a few.

A child's natural play area can include simple gardening at a very basic level and as an opportunity to learn and grow with nature. This can be included in a rear yard and to be enjoyed by all family members. Why not have Grandad come over and dabble in the garden while grandson plays nearby?

In the words of Robert Steffen, farm manager for a boys' home, observes: "Gardening is good therapy for young and old. The earth has great healing power. It is the plant of course that makes it all possible. Plants are a source of great hope for those who are disturbed, frustrated and concerned about the future."<sup>6</sup>

### FOR CHILDREN WITH VISUAL IMPAIRMENTS

There are other features in gardens that can be introduced into a *freeplay* garden area. Children who are blind or have visual impairments will enjoy the scents of plants and herbs and other aromatic plants. Aromatic plants can also be beneficial for children with SPD. Ornamental grasses will be a fun place for kids to play and provide soothing sounds as will the sound of a water fountain. Kids love to play in water and, remember, in a *freeplay* area, kids are encouraged to interact with the environment and yes, even get dirty!

The same design concepts for raised planters apply to raised sandboxes. And play decks. Make sure there is water near a sandbox but never allow a hose to cross a walking or rolling path as this can be a tripping hazard. Raised sandboxes should have a min. 27" open underneath for wheelchair or chair space. This will allow 7" for structure and sand space as the top of the raised box should be no higher than 34" for maximum access.

These raised sandboxes can be formed into zigzag or cloverleaf patterns, so kids can move themselves into the "U" shape of the clover if they wish, and be surrounded on three sides by the sand box, thus immersing them in the sandy area without sitting in or on it. Waterproof electrical outlets should be provided for those using ventilators or other machines. Shade should be provided over the play area and preferably by trees as children's tolerance levels to sun can vary greatly. Border the garden and play areas with trees. Fencing may also be

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**ACCESS FOR ALL:** (Left) Pathways to and within the play area deserve special attention; an inclusive path should be a minimum 4'-0" wide for wheelchair use. (Right) Always think inclusively and naturally so the *freeplay* garden can be enjoyed by the widest range of children and adults alike.

necessary to help define and contain the activity.

Pathways to and within the play area deserve special attention. Easy access to and within the area is essential in order to reach the *freeplay* garden area with minimum difficulty and maximum safety. If sloping paths are required, they should not be steeper than 1:15 gradient. 1:20 is even a better slope. (1 foot rise for every 20 feet long) and less is more in this case.

Grass alone is uneven and difficult for a person to navigate. Never create a path with bare dirt in an inclusive area as it may become slippery and dangerous when wet. Public playgrounds often use a rubberized ground surface but this may be unrealistic for a back yard play or garden area. All kinds of great products provide accessible and safe pathways. Plastic mesh products by the brand name of "Grasspave" have an open area that allows grass to grow between but still provides a solid level walking and rolling surface.

An inclusive path should be a minimum 4'-0" wide for wheelchair use. ADA requires a path to be 5'-0" wide so a person can walk along side or two wheelchairs can pass each other along the way. A 5'-0" diameter will also provide space for a wheelchair user to turn around and return the other way.

So remember, work is child's play.

When I would go up to tend to and play in my Grandfather's garden, he used to jokingly say, "Charlie, if you enjoy your work, I'll sure show you a good time." And so, as the TV advertisement would spout, "Don't underestimate the power of play." We can all

relate to the child at Christmas who, after ripping apart piles of gifts filled with what appear to be great toys, ends up fascinated and playing with a pile of wrapping paper and a bow.

Just remember to always think inclusively and naturally so the *freeplay* garden can be enjoyed by the widest range of children and adults alike.

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**"A CHILD'S NATURAL PLAY AREA CAN INCLUDE GARDENING AT A VERY BASIC LEVEL AS AN OPPORTUNITY TO LEARN AND GROW WITH NATURE."**

## References

1. Miller Lucy, "A case fir sensory play"2013, Intro letter in a handbook by Landscape Structures, issue #4
2. White Randy & Stoecklin Vicki, Children's Outdoor Play & Learning environments: Returning to nature. White paper thesis. No date given
3. Lewis, Charles A, Green Nature, Human Nature: The meaning of plants in our lives. Chicago, University of Illinois Press, 1996
4. Wilson, Ruth A, PhD. "The Wonders of nature-Honoring Children's Ways of Knowing". Early childhood news, March April 1997
5. Francis,Mark (interview) Ellen Rumpell, "Kids don't Need Equipment, They Need Opportunity, Smithsonian Magazine,v25,n4,pg78-87,july 1994
6. Venolia Carol, Healing Environments, 1988, Celestial Arts Berkely CA.

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