



# Envisioning Inclusion: Creating a Design Plan for Inclusive Playgrounds for Buddy Break

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## Abstract

The purpose of this project was to inspire, educate, and advocate for the creation of inclusive playgrounds in a variety of settings. Primarily, it aimed to inspire churches that host the pediatric respite care program, known as Buddy Break, to consider installing a playground that can be used by children of all abilities. An online questionnaire was used to explore and understand the perspectives of the parents/caregivers of the children that attend Buddy Break regarding playgrounds. Educational materials were then created to inform readers on the importance of designing playgrounds that can be used by children of all different abilities and the role of occupational therapy in that process. The materials also included the most current information regarding grants, playground materials and equipment. Advocacy for inclusive playgrounds and the promotion of the field of occupational therapy was incorporated throughout the project as the student presented to high school students, parks and recreation officials, Buddy Break coordinators, and church leaders.

## The Importance of Inclusive Play

Play is defined as, "any spontaneous or organized activity that provides enjoyment, entertainment, amusement, or diversion".<sup>1</sup> It is the occupation of childhood and it is through play that children learn and develop new skills.<sup>2</sup> Play is crucial to the development of a child physically, cognitively, socially, and emotionally. It is during play that children have the opportunity to practice these skills. Play is not only the primary occupation of childhood, but it has also recently been established by the United Nations as a basic right for all children.<sup>3</sup> Playgrounds are environments that are intended to facilitate play among children. However, research indicates that existing playgrounds are not usable for children with all different abilities. Children with disabilities are unable to use the playground on equal terms with their typical peers due to the presence of environmental barriers.<sup>4,5</sup> If children with disabilities are excluded from using playgrounds with their peers, they are susceptible to experiencing social isolation and play deprivation.

According to the 2010 U.S. Census, there are 2.8 million school-aged children, ages 5 to 17, living with a disability.<sup>6</sup> The U.S. Department of Health and Human Services recommends that children engage in a minimum of 60 minutes of vigorous physical activity daily.<sup>7</sup> Unfortunately, many children with disabilities have limited access to environments that would encourage physical activity, such as playgrounds. Not only would an inclusive playground help combat the obesity rate, which is 38% higher for children with disabilities according to the Center for Disease Control, but it would also provide an opportunity for children with disabilities to engage in social play with their typical peers.<sup>8</sup> The American Academy of Pediatrics asserts that children who participate in physical activity experience greater psychological well-being including increased self-esteem, learning capacity, and the ability to handle stress.<sup>9</sup>

## Accessible vs. Inclusive Playgrounds



### Applying the 7 Principles of Universal Design to Playgrounds

- Equitable Use**
  - Can all of the children use the same route to get to the playground equipment?
- Flexibility in Use**
  - Is the equipment flexible enough that it can be used in a variety of ways according to what is best for each individual?
- Simple & Intuitive Use**
  - Can children of all ages figure out how to use the play component?
- Perceptible Information**
  - Can users understand information regarding safety and age recommendations for the play equipment?
- Tolerance for Error**
  - Is it possible for the child to make a mistake when using the equipment without being injured?
- Low Physical Effort**
  - Can an individual who uses a wheelchair maneuver throughout the space without exerting extra effort?
- Size & Space for Approach & Use**
  - Is there enough space to approach and use the various play structures?
  - Does the design accommodate a wide variety of individual body shapes, sizes and abilities?

## Occupational Therapists and their Role in Inclusive Playground Design

### Why should an OT be involved with designing a playground?

Occupational therapists (OT) understand the importance of play and the benefits to promoting the use of appropriate play activities for all children. They are also knowledgeable about the skills needed for children to participate in play activities. This knowledge helps them to modify and adapt activities and environments to meet the needs of the child. OTs can help create opportunities for the "just right" challenge. A "just right" challenge is an activity that challenges the child, but is not so difficult that the child cannot experience success.<sup>2</sup> The profession also advocates for play spaces that can be used by children of all abilities. Finally, occupational therapists understand accessibility requirements and how to identify products that incorporate universal design.

### How can they help with playground design?

Occupational therapists can lend their expertise and perspective through a consultative process. For example, there are a variety of sensory play opportunities possible for a playground and an occupational therapist can help determine which ones are most appropriate for the population of children that are served by your facility. Playground equipment catalogs can be overwhelming with the number and assortment of products offered. Again, an occupational therapist can contribute their unique perspective and help you identify the best, most inclusive equipment option for your playground. Let's take spinners as an example. There are three inclusive spinners from which to choose and they include: the Merry-go-all by Gametime (left), the Ten Spin by Miracle Recreation (middle), and the Omnispin by Landscape Structures (right).



Which spinner is best? An occupational therapist would evaluate each piece of equipment to determine the skills that a child would need to play on this piece of equipment. There would be physical demands such as transferring from a wheelchair onto the spinner. If a child is unable to transfer themselves independently, can their parent transfer them without too much difficulty? An occupational therapist would also consider how a piece of equipment can support social, interactive play. Let's look at the similarities and differences between these pieces and decide which option is most inclusive. They all have high backs. High backs offer more support for children with poor trunk control. All of these pieces accommodate multiple children, thus promoting social play. However, the Ten Spin is designed in such a way that the children are not facing each other. There is limited opportunity for face to face interactions on this piece of equipment. Additionally, due to the fact that children are facing outward, there is also the potential for children to easily fall out of or be thrown from the Ten Spin. Considering these design elements, let's eliminate the Ten Spin as an option. Next, let's evaluate how a child would get onto and off of this equipment. At a maximum height of 18-inches, the Omnispin easily allows a child to transfer from their wheelchair to the equipment and vice versa. A parent can also easily lift their child over this small clearance height. The Merry-go-all, on the other hand, is mounted higher off of the ground and has a maximum fall height of 48-inches. The presence of the bucket seats on the Merry-go-all also makes transferring and positioning a child into that piece of equipment more difficult. Ultimately, using an occupational therapy lens, it can be determined that the Omnispin by Landscape Structures Inc. is the most inclusive spinner.

## The Design Plan

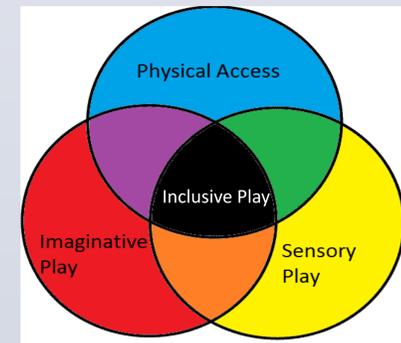
A manual was created as a resource for facilities, especially churches that host the Buddy Break program, on how to acquire an inclusive playground. The manual was organized into the following sections:

1. Plan it
2. Design it
3. Fund it
4. Build it
5. Sustain it

The most emphasis was placed on the design phase of the process. When designing the playground the manual proposed that the following three elements be considered:

1. Physical Access
  - Routes
  - Ramps
  - Surfacing
2. Sensory Play
3. Imaginative Play

In unison these elements create an opportunity for inclusive play. Physical access involves how an individual gets to and experiences the playground. It includes routes and ramps to, from, and on the play equipment and appropriate surfacing. The specifications set forth by the Americans with Disabilities Act for width, running slope, and cross slope were included in the manual. Additionally, each of the 5 types of surfacing options were reviewed according to their pros, cons, and approximate cost for each. Pictures were provided throughout the materials to help the reader visualize the concepts and products being described.



## Sensory Play

It is essential to include sensory play components for a variety of reasons. First, a child explores and learns about their environment by using their senses. They also learn about their body and how it moves and works through sensory play. Some children, however, may have deficits related to receiving and interpreting this sensory information. These deficits may occur as the result of a specific disability, such as visual impairment, or due to the inability to process incoming sensory information. Playgrounds that provide a variety of rich, sensory experiences would appeal to children of all abilities, including those with visual and hearing deficits, and they would offer children an opportunity to engage in sensory experiences at their own pace.

This roller slide, manufactured by Landscape Structures, provides tactile stimulation, and vestibular and proprioceptive input. The child's sense of touch is engaged as they feel the sensation of the rollers across their body. Changing positions and the pressure applied to the joints by pulling and pushing incorporate the vestibular system and proprioception, respectively. The slide is wide enough to allow friends to go down together, thus encouraging social interaction. The rollers also prevent the buildup of any static electricity which is beneficial for children who have cochlear implants or hearing aids.



## Imaginative Play

Imaginative play, which is also commonly referred to as pretend play, fosters creativity and a variety of other skills. It allows the child to be removed from reality, be spontaneous, and to direct their own unique play. It encourages a child to utilize appropriate social interactions and it is often during pretend play that children practice adult roles.<sup>2</sup> While imaginative play can definitely occur on a playground without specialized equipment, certain elements can be included to inspire a child's imagination.

Activity panels can contribute to a playground theme and promote imaginative play scenarios. Children can pretend to play "house" and "store" with the panels pictured here by Little Tikes.



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