

Collected Research for Karst Farm Playground Steering Committee

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Examples of Universally Accessible Playareas

Indiana

- Freedom Field, Columbus, IN
 - 1.5 acre inclusive playground built by the Columbus Service League and the Columbus Department of Recreation
 - Built by the IRMCA and Repp & Mundt, Inc., a local contractor.
 - Pervious Concrete acts as the base with a 3.25 inch rubber surface on top
 - Cost around \$600,000 to build
 - Outdoor lab training for in occupations for special needs children
- Independence Park, White River Township, IN
 - Located in Johnson County Park
 - First universally accessible playarea in Indiana
 - 13.5 acres
 - 8,000 square foot Playground Area with over 100 components all-accessible with rubberized surface underneath each component
 - Sensory Playground Area with 20 components for children with Autism
- Grant Henry Playground, Indiana School for the Deaf, Indianapolis, IN
 - While built to be universally accessible, special emphasis given to the needs of children with hearing problems
 - Because nearly all communication at the school is done through signing, the courtyard's design allows monitors to maintain a visual connection with the students at all times.
 - Five unique gardens which loosely interpret some of Indiana's most distinct historic eco-regions

- "Art walls" within the courtyard provide exhibit space to display student art, class projects, interpretive displays, and other media.

United States

- Noah's Playground for Everyone, Evanston, IL
 - Cost of about \$950,000
 - Volunteers provide an annual "beautification day" to maintain the esthetic quality and safety of the playground
 - A sandbox that is suspended to let those in wheelchairs play next to those who can stand or walk
 - Coverage in the local press, including stories on NBC 5, in the May edition of North Shore Magazine, on WXRT, and in the Chicago Tribune.
- Adventure Island Playground, Meridian, ID
 - 2 acres park developed entirely by volunteers
 - Idaho's first universally accessible playground
 - Cost about 1.1 million dollars
 - "Tree of Hope" with a root system comprised of bricks which are reserved as a fundraiser
- Shane's Inspiration, Los Angeles, CA
 - First universally accessible playground in the Western United States and largest in the nation
 - 2 acres
 - Shane's Inspiration has helped raise millions of dollars to develop over 40 Universally Accessible Playground projects
 - City of Los Angeles passed a Universally Accessible Playground Initiative to fund continued development of universally accessible playgrounds
 - The most popular playground in Los Angeles and the recipient of numerous awards

Playground Vendors

National Recreation and Park Association. (2006). *Parks and Recreations Buyer's Guide 2006*.

Retrieved on May 30, 2007 from <http://www.nrpa.org/content/default.aspx?documentId=507>

This publication from the National Recreation and Park Association lists all national manufacturers of playground equipment and surfacing materials in the first section. The second section lists all services/products (for instance, handicapped ramps and aids) with manufacturers listed under each service/product. This gives us an idea of what is available on the market for certain products/services.

National Center for Boundless Playgrounds. (2006, January). *Boundless Playgrounds Announces New Playground Industry Partners*. Retrieved on October 01, 2006 from <http://www.boundlessplaygrounds.org/news/recentarticles/article13.php>

This articles list the manufacturers of playground equipment which have been approved by Boundless Playgrounds: a nonprofit organization committed to increasing playground accessibility and inclusion. The companies offer a section of Boundless Playgrounds certified models in their catalogs and websites. The royalties from the sale of these models will help fund challenge grant programs for building Boundless Playgrounds and support Boundless Playgrounds. The playground industry partners are: Miracle Recreation Equipment, Little Tikes Commercial, Playworld Systems, GameTime, Park Structures, Big Toys and Recreation Creations.

J. Skulski, personal communication, June 7, 2007.

Designers recommended by Jennifer Skulski at the National Center for Accessibility.

Local designer who designed the Indiana School for the Deaf

Craig Glazer, ASLA

12 S. Main Street, Suite 100

Fortville, Indiana 46040

tel: 317.485.6900

fax: 317.485.6912

email: indiana@context-design.com

Manufacturer that assisted City of Detroit to develop purchasing /surface testing specs:

Rolf Huber

Everplay

(416) 410-3113

rolf@everplay.com

Designer for Inlow Park in Carmel

Terri Hendy

Site Masters, Inc

P.O. Box 58676, Cincinnati, Ohio 45258

Phone: 513-922-1499

terihendy@aol.com

Best Practices Research

Bauman, J. (2005, December 21). *Benefits and Barriers to Fitness for Children with Disabilities*.

Retrieved from http://www.ncpad.org/yourwrites/fact_sheet.php?sheet=205&view=all

This article gives a general background on the barriers children with disabilities face when they try to participate in recreational activities. It also has a section on why it is important developmentally that we break down these barriers faced by children with disabilities.

Public Attitudes

- People are unaccustomed to seeing children with disabilities in public.
- It is important to have image of children with disabilities in publicity for recreational sites to help dispel these attitudes

Physical Access

- Sufficient parking
- Accommodations for vans with lifts
- Doors that open easily
- Elevators or ramps inside buildings accessible bathrooms
- Changing stations or universal access rooms
- Barrier-free entry to pools
- Adaptive equipment
- Play equipment to accommodate wheelchairs
- Lower drinking fountains
- Restrooms or accessible port-a-potties
- Picnic tables that can accommodate wheelchairs
- Barrier-free surfacing
- Line-of-sight seating for arenas
- Stadiums and ball diamonds
- Seating with additional room and accessible concession counters
- Wheelchair-accessible platform swings
- Lowered monkey bars
- Elevated sand boxes and water play tables
- Talk tubes
- Turning wheels
- Play walls with push buttons and cranks
- Wide slides and ramps to accommodate children who use wheelchairs walkers or leg braces
- Boundless Playgrounds and Hadley's Park as examples

Transportation

- Under the ADA, parks must make reasonable accommodations for persons with disabilities

Assistance

- Personal Care Assistant to accompany person with disability and provide assistance
- Recruit volunteers such as recreation therapy students
- Inclusion Aides can assist those with disabilities in leisure programs

Benefits

- Physical activity increases child's ability to cope with stress and anxiety
- Self-esteem and building friendships are increased with physical activity

- Other benefits include socialization, learning skills, setting goals, having fun, and being part of a team

Becker, P. (2005, September 01). *Playground Accessibility: Equal Fun for Equal Play*. Retrieved on December 01, 2006 from <http://www.parentmap.com/content/view/190/263>

This article discusses general ADA guidelines and discusses the Seattle Children's Playgarden as an example of a universally accessible playground. It also talks about the benefits of playgrounds for children with disabilities.

Benefits

- Build large motor skills
- Encourage outdoor play between kids with disabilities and those without disabilities
- Challenge themselves
- Test and develop their strengths
- Allow parents /grandparents with disabilities to play and interact with their children

General ADA Guidelines

- Children in wheelchairs can move around on the playground surface or path to the play area
- There are transfer ramps with wheel stops and guardrails for children to get onto higher equipment
- There is separate equipment for all developmental levels
- The is separate equipment for all developmental levels
- The playground equipment and surface are maintained
- There is space for adults to help children play on the equipment
- All openings on elevated play platforms are limited in width
- There are hands-on areas for children sitting in wheelchairs
- All playgrounds for children age 2 and up must comply with ADA guidelines after January 26, 1992

Features

- Quiet spaces for children to rest and regroup from playground stimuli
- Features that challenge the senses
- Plants to smell
- Sculptures to feel
- Different textures on which to roll, walk, scoot, drag and crawl over

Seattle Children's Playgarden

- Full staffed facility where therapists can meet their clients and work in the playgarden
- Entire perimeter is fenced

- Edible, sensory and alpine gardens
- Accessible tree house
- Streams, cave, marsh and meadow environments
- Climbing mounds
- Sandbox
- Play features encouraging gross motor skill development
- Fully wheelchair accessible basketball court
- Building for offices and community use

Bystrynski, C. Six hot topics in playground design. *PTO Today*. Retrieved on December 01, 2006 from <http://www.ptoday.com/articles/article.php?article=0303playground.html>

This article discusses six current fads in playground design. It outlines why each of the six topic areas are important and what they mean for someone building a playground.

Free Play

- Playing without adult supervision allows for spontaneity and creativity
- Builds social skills, confidence and self-esteem and stimulates brain development

Kid Stuff

- Do not focus solely on which pieces of equipment develop which skills remember to ask, “what do children want?”
- Is the playground fun?

Young Designers

- The best playgrounds involve children in the design process
- Have children draw pictures of what they want; this helps to identify themes that can be incorporated into the playground design, including color schemes

Beyond Accessibility

- Playgrounds that are not just accessible but inclusive
- Children with disabilities need to participate on an equal level with all children
- One in ten children has a disability that prevents him/her from playing on traditional play structures
- Create alternate routes for handicapped children

Highs and Lows

- Falls to the surface cause 70% of all playground injuries; this has caused a trend toward lower play structures
- Providing a variety of levels plays an important developmental role

- Have a variety of heights available for children and make sure to provide a safe, well-maintained surface appropriate for the height of the equipment

Safety

- The national program for Playground Safety advocates a four-point plan called SAFE: Supervision, Age-appropriate design, Fall surfacing, and Equipment and surface maintenance
- Supervision is often left out. 40% of injuries result from lack of or inappropriate supervision

Christensen, K. & Morgan, J. (2003, April). When child's play is anything but to help children with disabilities, design by types of activities, not types of equipment. *Parks & Recreation*. Retrieved December 2, 2006 from, <http://www.nrpa.org/content/default.aspx?documentId=507>

This article outlines the different types of activities which are essential to a child/person's physical and mental development. Most play equipment only offers "dizziness" activities, defined as large muscle activity that causes children to experience the illusion of movement. While this type of activity is important, there are seven other activities which are also fundamental to a healthy development.

Free Play

- Unstructured, spontaneous and voluntary
- Considered extremely beneficial for children with disabilities whose access to free play with peers may be limited.

Passive Resting (Meditative Stimulus):

- Resting places allow children with disabilities time to rest and internalize the effects of a stimulus. For example, children with autism may need to withdraw and internalize their experiences.

Exploratory Activities (Cognitive Stimulus):

- Games and activity panels are commonly use to stimulate children's cognitive skills on playgrounds but this type of equipment can become repetitive.

Dramatic Activities (Imaginative Stimulus):

- This type of play allows children to assume a different role and persona and is beneficial for children in all developmental stages.

Interactive Activities (Social/Emotional Stimulus):

- Providing opportunities for interaction with both able-bodied and disabled peers is critical for children with disabilities because social isolation is all too common.

Practice Activities (Developmental Stimulus):

- This involves physical development such as balance, strengthening large muscles, and increasing fine motor control. These activities are extremely important for children with disabilities but remember that children do not go to playgrounds for therapy. They go to playgrounds to have fun!

Sensory Cues:

- For children with sensory impairments, sights, sounds, colors, textures and smells can enhance the play experience.

Early Childhood Information Clearinghouse. *Accessible Playgrounds for all Children*. Retrieved December 01, 2006 from <http://www.healthandwelfare.idaho.gov/DesktopModules/ArticlesSortable/ArticlesSrtView.aspx?tabID=0&ItemID=555&mid=10449&wversion=Staging>

This article discusses the various needs of children with disabilities. It also gives examples of universally accessible playgrounds in the United States.

- Less than 10% of children with physical disabilities are able to leave their support devices behind and if they do, often can only pull themselves along with their arms or crawl through the equipment
- Crawling when your peers are running can be degrading; for many children, their ambulatory device is their key mobility and self-esteem
- Brain stimulation produced during play significantly contributes to the growth and hardwiring of neural circuitry and that play deprivation results in biological regression of brain development
- Play prepares the brain for cognitive performance in areas such as language, art, math, science and emotional stability and interpersonal skills
- Go beyond ADA guidelines and have a minimum of 70% accessibility and provide activities enhancing the development of every child

Important developmental skills

- Cognitive development
- Increased imagination
- Creativity
- Increased discovery and reasoning
- Problem solving
- Enhanced manipulative skills

- Expanded social awareness

Universally accessible playground

- The Adventure Island Playground; Meridian, ID
 - Community built because universally accessible playgrounds can be much more expensive

Frost, J.L.; Brown, P.; Sutterby, J.A.; & Thornton, C.D. (2004). *The Developmental Benefits of Playgrounds*. Olney, MD: Association for Childhood Education International.

This book is the definitive work on the developmental benefits children receive from using a playground. It shows that playgrounds are not just for fun, but they are a learning tool which greatly contributes to children's physical, emotional, social, and cognitive development.

Chapter 1: Child development, play and playgrounds

- The early years of playgrounds emphasized imagination and development with a wide range of natural play materials, equipment, and gardens.
- After the formation of the NRPA, the emphasis became on recreation rather than spontaneous play and playgrounds.
- The adoption of guidelines and standards, as well as numerous lawsuits, lead to the standardization of equipment and the closing of playgrounds.

Free Play

1. The most beneficial type of play characterized by 5 elements
 - Voluntary
 - Spontaneous
 - Involves a pretend element
 - Engaging
 - Fun and pleasurable
2. Allows children to do what their bodies need to do-move. Development depends on movement.
3. Developmental theory holds that the predominant way young children acquire information is through play. Researchers have discovered that play leads to greater creativity and imagination as well as higher reading levels and IQ scores.

4. The link between play and learning is biological and is the result of electrochemical synapses working within sensory cells inside the brain
 - There is a risk that if some experiences are not had early, the brain may be ill prepared to respond to similar experiences later in life
 - If children lack opportunities to pretend, their long-term capacities related to critical thinking, problem solving, and social functioning, as well as to academic areas such as literacy, mathematics, and science may be diminished.
 - Research shows that children deprived of play experiences are prone to depression and hostility.

Outdoor Play and Playgrounds

1. Two common misconceptions of outdoor play are that: outdoor play is a time for children to expend excess energy, and that playgrounds are merely places for children to develop gross motor skills
2. When designing playgrounds, it is essential to consider design on the basis of types of play activities rather than simply on types of equipment.
3. Toddlers Play
 - Have the cognitive complexity necessary to use one thing in deliberate pretense for something else
 - Interested in incorporating symbolic or pretend aspects of objects into their play
 - Begin to include other actors and inanimate objects into play
 - Rapid development of motor skills: locomotor, small motor and stability
4. Preschoolers Play
 - Cognitive progress is highly noticeable in their play
 - Greater levels of interaction and role-playing: sociodramatic play. Provides an essential sense of belonging
 - Fundamental Movement Phase: need wide range of physical challenges
5. School-age Play (6-8 Years)
 - Children's thinking shifts from the preoperational stage to the concrete operations stage: become more logical thinkers
 - Games-with-Rules play: causes higher levels of social competence and interpersonal and intrapersonal skills

- For GwR play to occur, children need space.

Chapter 2: Obesity and changing lifestyles of children: Diet and physical activity

Gaining Weight

1. Children consume calories through their natural growth; this complicates weight control measures for children, since severely curtailing their caloric intake can lead to stunting of growth
2. One pound of weight gain is equivalent to 3,500 calories.

Definitions of obesity and overweight

1. Body mass index is used to identify the level of overweight or obesity in people: calculated by dividing body weight in kilograms by height in meters squared.
2. Obesity= having a BMI at or above the 85th percentile with respect to age and gender

Physical health and obesity

1. Obesity causes cardiac risk factors, skin disorders and orthopedic problems
2. Type 2 diabetes is on the rise in younger populations due to childhood obesity
3. Fivefold increase in sleep apneas connected to childhood obesity

Obesity Persists

1. 70 to 80 percent of obese/overweight children become obese/overweight adults
2. Children with at least one obese parent are also more likely to become obese adults

Psychological health and obesity

1. overweight children often endure ridicule, torment and prejudice from children and adults
2. overweight classmates are seen as lazy, sloppy, dirty, stupid, ugly, less likely to have friends, less liked by parents, less likely to do well at school, less satisfied with their appearance, and more likely to be teased
3. Obesity can be a determinant of low socioeconomic status due to prejudice especially for females

Weight gain and physical activity

1. Children's participation in sedentary activities has increased dramatically
2. Obese children participate in fewer hours of play and extracurricular activities
3. A quarter to one-third of all children in the U.S. are obese

4. The CDC recommends 60 minutes of moderate to vigorous physical activity daily for children ages 5 to 18.
5. Girls are disadvantaged in that they have fewer opportunities than boys to play outdoors and participate in sports.
6. Schools are eliminating recess and increasing homework which is leading to higher levels of sedentary activity

Physical activity and the environment

1. Many physical factors contribute to physical activity in children
2. Finding time and place for exercise can be a challenge for children
3. Safety and traffic concerns prevent parents from letting children play outside
4. Children engaging in play on colorful indoor play environments were more active than children on typical playgrounds
5. Children with playground equipment are significantly more active than children without playgrounds

Physical activity and socio-cognitive variables

1. Physical activity may be increased by prompting from adults
2. Affective factors, such as self-efficacy, are important for physical activity
3. Children also engage in greater levels of physical activity when they are with their peers
4. Physical activity leads children to be more focused and with the energy to complete academic tasks
5. There is a great need for environments that include play equipment that is developmentally appropriate yet challenging for a variety of children

Chapter 3: The relevance of height for child development and playground safety

Scope of playground fall injuries

1. Falls are the second leading cause of unintentional injury and the most common cause of injuries resulting in hospital admissions for trauma
2. Protective surfacing under and around all play equipment is the most critical safety measure on playgrounds

Children's propensities to climb and value of height

1. The broader the range of experiences, the better for development

2. Preventing injuries is contingent upon making children safe for playgrounds
 - a. Children need opportunities to develop their physical and developmental maturity
 - b. Climbing is a natural stimulus; the best equipment is sufficiently complex to stimulate, yet are not so complex as to pose unwarranted hazards

Fear of Heights

1. Children need many locomotor experiences to help them cope with hazards such as heights
2. Vestibular dysfunction of learning disabled children may lead to imbalance-related fear of heights; children with ADD are more likely to be injured on a playground

National Standards and Guidelines for Surfacing and Heights

1. Two primary factors are responsible for injuries in falls: acceleration from a height and nature of surfacing material
2. Focus on the provision of resilient surfacing under and around equipment
3. The CPSC identifies the fall heights for various types of playground equipment
 - a. Shredded tires were the top performers in the CPSC test with fall heights up to 10-12 feet. (Manufactured materials not tested)
4. The American Public Health Association and the American Academy of Pediatrics standards stipulate that the maximum height of playground equipment shall be no greater than 5.5 feet for children up to the age of six and no higher than three feet if the maximum age of children using it is three years.
5. 93% of injuries have violations of CPSC and ASTM recommendations
6. The highest accessible part of slides and climbers should be the maximum height above ground of the guardrail or protective barrier; the highest accessible part of swings should be equivalent to the maximum height of its support structure. The highest accessible part of equipment should not exceed ten feet above the surface for school-age children or seven feet for preschool-age children.
7. Maximum fall height of to-fro beams should not exceed eight feet for school-age children or seven for preschool children
8. Maximum fall height on overhead apparatus should not exceed six.5 feet for school-age children or five feet for preschool children
9. Maximum height for platforms, decks, slides, and climbers should not exceed six to eight feet for school-age children or four to five feet for preschool children.

10. Overhead beams of rotating tire swings should not be installed lower than seven feet for preschool-age children or eight feet for school-age children

Chapter 4: The developmental benefits and use patterns of overhead equipment on playgrounds

1. The availability of overhead equipment allows children more upper body experience
2. A guideline for height of horizontal ladders should be slightly above the reaching height of 95th percentile users
3. Use resilient, balloon-type tires mounted in the ground as steps to reduce injuries
4. Overhead equipment encourages social scaffolding

Benefits of Overhead Equipment

1. American children generally have very poor upper body strength; overhead equipment develops the strength

Development of Upper Body Skills

1. Overhead equipment develops skills in visual perception and coordination, physical development of upper body strength, and lateral movement.
2. The development of upper body skills is linear: unable to support body weight, dysrhythmic time-step, rhythmic time step, unilateral swinging, and bilateral swinging. Children need to start young to develop basic skills.
3. Over head ladders should have rungs no more than twelve inches apart for preschool-age children and no more than fifteen inches apart for school-age children.
4. Maximum overhead equipment height of sixty inches for preschoolers and eighty-four inches for school-age children
5. No metal bars at the ends of overhead apparatus that would allow children to climb on top of the overhead bars
6. Overhead rings should be 1 to 1-1/8" diameter. Plastic coating is recommended.
7. Overhead rings should be attached to 8" to 12" of chain to allow the swinging motions.
8. All overhead apparatus should have "take-off" decks constructed from very resilient material

Chapter 5: The nature and benefits of children's climbing behaviors

1. Climbing develops cognitive skills, physical skills, and self-confidence

Cognitive Requirements

1. Route Finding is the act of perceiving possible climbing actions to find a good path to climb: people chunk complex patterns of possible hand and foot holds on a climbing structure together to form long-term visual perceptual memories.
2. Memory is also used in recalling motor sequences
3. Cognition is also used because children work to problem solve as they climb

Physical Requirements

1. Motor skills involved in climbing include perceptual motor skills such as body, spatial and directional awareness
2. Abilities associated with fitness like power, agility, speed, balance and coordination are used in climbing
3. Visual perceptual skills are also required for climbing
4. Children with disabilities require assistive device and ramps/transfer stations to engage in climbing

Types of Climbers

1. Two kinds: fixed climbers are made from solid steel or wood and can be formed into a variety of shapes and forms, flexible climbers, like tire, chain, and rope climbers ay present a greater difficulty level for they require a higher level of coordination due to the unstable means of support.
2. Rock climbing is recommended
3. The most beneficial climbers are those which allow for progression and extended development of skill like the Trunk Climber or Cargo Net Wall
4. Have a variety of climbers for different ages and skill levels

Chapter 6: Functions and benefits of playground swings

1. Provide unique experiences with speed and force which fixed equipment doesn't give
2. Swinging encourages "open skill" development and is beneficial for social/emotional development. Cognitive development is also advanced along with, in particular, the vestibular system, proprioceptive system, and the visual system

Hazards Associated with Swings

1. Swings are second to climbers in percent of injuries
2. Swings tied with slides are most common equipment involved in litigation
3. Strangulation is the most frequent cause of death involving playground equipment

4. Swing seats should be made of lightweight, resilient materials
5. Visual barrier of tires embedded vertically around the swing
6. Make sure all S-hooks are closed, all protrusions are avoided, and swing set is firmly anchored in the ground

Study Findings

1. Strap swings were the most popular type of swing
2. Need a variety of different swings for different developmental levels

Chapter 7: Sand and water play

1. Active exploration of the environment has been linked to development of neural connections in the brain
2. Complex forms of dramatic and constructive play are encouraged
3. Sand provides a sensory experience and meets the need for kinesthetic experiences
4. Water play promotes the development of mathematical concepts of empty/full, shallow/deep, rational counting, measure and sets, among other skills
5. They also foster social development, as well as being a therapeutic tool

Tools for Sand and Water Play

1. Loose parts for manipulating the sand/water and containers for the substances are essential
2. These help to aid in learning and cognitive development

Chapter 8: Playgrounds for the 21st century

Recommendations for Playground Designers and Builders

1. Designers need to look at dichotomous relationships of different cognitive, emotional, social, physical, and sensory experiences
2. Children need a large assortment of different experiences including a resting space
3. Playgrounds should be unique
4. Elements to add to playgrounds: gardening, natural areas, sand and water play, stimulus shelters, organized games, variety and complexity, enhanced movement, playground layout tailored for particular population, proper surfacing, and accessibility

Recommendations for Playground Users

1. Supervisors must develop skills in observing children at play to assess their levels of skill development
2. Supervisors should have set rules for playground use which still allow children to experiment with different forms of play
3. Supervisors should pay attention to the condition of playground equipment, materials and environment along with informing children of playground hazards

Recommendations for All Groups

1. People need to insist on healthful habits and balance for children; we must encourage physical activity
2. Everyone should make sure their playgrounds are well-designed, well-maintained, and well-supervised

Kennedy, M. (2002, July 1). Strategies for success: Accessibility. *American School and University*. Retrieved December 01, 2006 from http://preview.asumag.com/Construction/accessibility/university_accessibility/

This article discusses the ADA guidelines as well as other considerations to be taken into account when building an accessible structure.

- Avoid installing a “ramp to nowhere.” This is a ramp which only creates the illusion of accessibility because once the child ascends the ramp they find equipment that is unsafe or inappropriate for them to use
- Be sure to consult early-childhood-education experts, physical therapists, occupational therapists and children when designing a playground

National Center on Accessibility. *National Center on Accessibility Notes*. Retrieved December 01, 2006 from www.ncaonline.org

This page of notes gives the National Center on Accessibility’s recommendations and notes on building a universally accessible play area.

- Every feature of play event does not have to be usable for every individual, however, “like experiences” must be available
- Should be accessible for adults with disabilities and children with disabilities.
- Allows for social integration to take place
- Include consumers throughout the planning process
- Place signs displaying the international symbol for accessibility on entrances or posts not equipment. Signs on equipment can trigger labeling and stereotyping
- There is no such thing as playground equipment and surface equipment that is ADA approved

- Best to use equipment that incorporates both ramps and transfer points in its design
- To get started, determine types of experiences that would be most beneficial to all users, then ask vendor to suggest types of equipment and to design play component blueprints and to describe accessible features and routes of travel
- Make sure vendor/architect is designing an accessible playground: visit other playground sites the vendor has designed and take potential users and an accessibility specialist along
- Surfaces should meet ASTM and other safety requirements for children's environments.
- Unitary surfaces are better, but they must be applied with proper consideration for drainage and climate extremes
- Unitary surfaces applied with adhesives directly to concrete foundations tend to shift and cause ruts between sections after one or two seasons

Research Playground Safety & Accessibility: KaBOOM! Recommended Fall-Zone Surface Materials.
Retrieved December 1, 2006 from www.kaboom.org

This document outlines the pros and cons of organic loose fill and synthetic unitary materials.

Organic Loose Fill

Advantages

- Low cost
- Easy, volunteer-friendly installation
- Good drainage
- Less attractive to animals than sand

Disadvantages

- Over time, wood compacts and decomposes and must be replaced
- Can be thrown into children's eyes during play
- Can be flammable
- Spreads easily outside area if not contained properly
- Does not necessarily meet ADA recommendations
- All organic loose fill requires periodic maintenance and/or replacement

Synthetic Unitary Materials

Advantages

- Low Maintenance
- Consistent shock absorbency
- Generally meets ADA specifications
- Attractive

Disadvantages

- High initial cost
- Some products must be professionally installed
- May be subject to vandalism
- Some designs are susceptible to problems in severe cold

Soft Play, L.L.C. Questions. Retrieved on December 01, 2006 from www.softplay.com

This website gives general questions you should ask when choosing a playground manufacturer. They suggest looking at companies that design playgrounds for fast-food restaurants.

- How long has the company been in business?
- Can we see a customer list/photographs/ or examples of playgrounds you have installed?
- How many children will play on the equipment each day?
- Will you use the playground for sports and events?
- What will be the age range of children visiting the playground?
- What is the estimated length of time children will spend on the playground?

Stoecklin, V.L. (2000). Creating playgrounds kids love. *White Hutchinson Leisure & Learning Group.* Retrieved December 01, 2006 from <http://www.whitehutchinson.com/children/articles/playgrndkidslove.shtml>

This article gives advice on how to create a playground which enhances children's development while still being fun for kids. There is an emphasis given toward using natural outdoor elements and creating a "playgarden."

The value of free play

- Children learn best through free play and discovery
- Quality play involves the whole child and includes gross motor skills, fine motor skills, senses, emotion, intellect, individual growth and social interaction

Designing outdoor spaces children love

- Use landscape and vegetation as the play setting and nature should be incorporated into the play materials (discovery playgarden)
- Spaces that are informal and naturalistic
- Should have sand, water, props, and naturally found objects that allow children to control and manipulate the environment
- Structures are made of natural materials and use the landscape in natural ways
- Plants are essential (try to use locally found plants and settings)

Cost

- Discovery playgardens are not more expensive than traditional playgrounds.
- Money is just allocated differently. Money which would go to traditional play equipment is spent on landscaping and creating play areas using natural materials

How to select a designer

- The designer must consider the people and terrain, the plant and animal life and types of play to be experienced.
- Designers must be educated in child growth and development, construction and materials, universal/accessible design, budget management, landscaping for children, play facilitation, safety and early childhood education
- General architects/manufacturers lack this type of knowledge

ADA Standards and Requirements Research

U.S. Access Board. (2005, October). *Accessible Play Areas: A Summary of Accessibility Guidelines for Play Areas*. Washington D.C.

This document provides a basic overview of current standards for accessible play areas given by the Americans with Disabilities Act. The guide is divided into six different sections.

Where Do the Play Area Guidelines Apply?

- **Equivalent Facilitation:** designs that result in products as alternatives to those prescribed, provided substantially equivalent or greater accessibility and usability. The ADA strongly encourages consumers to go above and beyond their prescribed methods and standards.
- When play areas are constructed in phases, they must be reassessed at each phase to assure compliance with the guidelines.
- Play areas which are separated by age must be reviewed separately in determining compliance with the guidelines

What is a Play Component?

- At least one of each type of play component provided at ground level in a play area must be on an accessible route.
- When more than one ground-level component is required on an accessible route, the play components must be integrated.
- It is important to consider the optimal layout of ground-level components to foster interaction among all children.

How Many Play Components Must Be On An Accessible Route?

- Number and variety of ground-level components required to be on an accessible route is also determined by the number of elevated components provided in the play area.

Table 240.2.1.2 (text version)

This table lists the number of elevated play components provided and the corresponding minimum number of ground-level play components required to be on accessible route; and the minimum number of different types of ground-level play components required to be on accessible route:

Elevated components provided: 1
 Minimum number/ type of ground level components: not applicable/ not applicable

Elevated components provided: 2 - 4
 Minimum number/ type of ground level components: 1/ 1

Elevated components provided: 5 - 7
 Minimum number/ type of ground level components: 2/ 2

Elevated components provided: 8 - 10
 Minimum number/ type of ground level components: 3/ 3

Elevated components provided: 11 - 13
 Minimum number/ type of ground level components: 4/ 3

Elevated components provided: 14 - 16
 Minimum number/ type of ground level components: 5/ 3

Elevated components provided: 17 - 19
 Minimum number/ type of ground level components: 6/ 3

Elevated components provided: 20 - 22
Minimum number/ type of ground level components: 7/ 4

Elevated components provided: 23 - 25
Minimum number/ type of ground level components: 8/ 4

Elevated components provided: more than 25
Minimum number/ type of ground level components: 8 plus 1 for each additional 3 over 25, or fraction thereof/ 5

- If ramps provide access to at least fifty percent of the elevated play components (at least three different play types) then additional ground-level components are not required
- At least fifty percent of the elevated play components must be on an accessible route

What Are The Requirements For Accessible Routes?

- A ground-level accessible route connects play components at ground level.
- A ground-level accessible route must have 60 in. minimum clear width and a 1:16 maximum slope
- The route may narrow down to 36 in. for a distance of 60 in., and play areas less than 1,000 square feet may have ground-level accessible routes that are 44 in. clear width.
- An 80 inch vertical clearance applies to ground-level routes at 60 inches.
- A wheelchair turning space must be provided where the route exceeds 30 feet in length
- Objects may not protrude into the 60 inch wide space of an accessible route up to or below the height of 80 inches.
- Handrails are not required on ground-level accessible routes.
- Force required to propel a wheelchair across a surface must be less than that which is required to propel the wheelchair up a ramp with a slope of 1:14
- Ground surfaces must be inspected and maintained regularly and frequently to ensure continued compliance with the ASTM F 1292-04 standard.
- Elevated accessible routes must connect the entry and exit points of at least 50 percent of the elevated play components provided in the play area
- Ramps are required on composite structures with 20 or more elevated play components and must connect to at least 25% of the elevated play components.
- Each ramp must have 12 inch maximum rise, 1:12 maximum slope, and 36 inch minimum clear width
- Landings must: be as wide as the ramp they connect to, minimum length of 60 inches, and if ramps change direction the minimum landing size must be 60 inches wide to accommodate a turn
- At least one maneuvering space must be provided on the same level as the play component; the slope must be no steeper than 1:48 in all directions
- Handrails are required on both sides of ramps connecting elevated play components: clearance b/w handrail gripping surfaces and adjacent surfaces shall not be 1.5 inches minimum
- Handrail gripping surfaces shall be continuous along their length and unobstructed along their tops or sides. The bottoms shall not be obstructed for more than 20 percent of their

length; horizontal projections shall occur 1.5 inches minimum below the bottom of the handrail gripping surface.

- At least 50% of the elevated play components can be connected by a transfer system when there are less than 20 elevated components; when there are more than 20 elevated components, transfer systems may be used to connect up to 25% of the components.
- A 24 inch minimum width is necessary for individuals moving around a structure
- Be careful about the distance someone must travel to reach play components accessed by transfer systems.
- Transfer platforms must be: 11 inches to 18 inches height of top surface, minimum 24 inches wide, minimum 14 inches deep, and unobstructed side.
- “wheelchair parking” required at the transfer platform which should be 48 inches long and parallel to the 24 inch side of the transfer platform
- Transfer steps: minimum 24 inches wide, minimum 14 inches deep, and 8 inches maximum height
- Transfer supports must be provided on transfer platforms and transfer steps at each level where transferring is the intended method of access
- When transfer systems are used, an elevated play component may connect to other elevated play components
- Take into consideration back support, increased space for maneuvering adjacent to the play component, and other features to promote independent use

What Other Accessibility Requirements Apply To Play Components?

- Clear floor space provides unobstructed room to accommodate a single stationary wheelchair and its occupant at a play component on an accessible route: 30 inch by 48 inch minimum area, may overlap accessible routes and maneuvering spaces, slope not steeper than 1:48 in all directions.
- A 60 inch turning circle permits individuals with mobility devices to turn around
- A 60 inch T-Shaped turn allows an individual to change directions by making a series of multi-point turns
- Objects are not permitted to intrude into maneuvering spaces up to 80 inches above ground
- Slope not steeper than 1:48 in all directions
- When play components are located on an accessible route, the height required to transfer directly to the entry point or seat of a play component has a minimum of 11 inches and a maximum of 24 inches. (mid-level height of about 18 inches)
- Play tables must have: 24 inches high minimum, 30 inches wide minimum, and 17 inches deep minimum.
- Reach ranges are about: 20-36 inches for 3-4 year olds, 18-40 inches for 5-8 year olds, 16-44 inches for 9-12 year olds

Soft Contained Play Structures

- Soft contained play structures must provide at least one entry point on an accessible route when 3 or fewer entry points are provided

- Transfer systems or platform lifts can serve as a part of an accessible route connecting entry points on soft-contained play structures

United States Access Board. (2004, July 23). *Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines*, Washington D.C.

This is a compilation of every requirement set forth in the ADA and ABA which any organization must meet when building an accessible structure. It gives the bare minimum standards an organization must reach beyond to build a truly accessible playscape.

Parking Spaces

- Car parking spaces shall be 96 inches wide minimum and van parking spaces shall be 132 inches wide minimum shall be marked to define the width and shall have an adjacent access aisle.
- Access aisles shall adjoin an accessible route. Access aisles shall be 60 inches wide minimum, shall extend the full length of the parking spaces they serve and be marked so as to discourage parking in them.
- Access aisles shall not overlap the vehicular way. They may be placed on either side of the parking space except for angled van parking spaces which shall have access aisles located on the passenger side of the parking spaces
- Access aisles shall be at the same level as the parking spaces they serve- slopes shall not be greater than 1:48
- Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches minimum
- Parking space identification signs shall include the International Symbol of Accessibility; signs identifying van parking spaces shall contain the designation “van accessible”
- Signs shall be 60 inches minimum above the finish floor or ground surface measured to the bottom of the sign
- Parking spaces and access aisles shall be designated so that cars and vans cannot obstruct the required clear width of adjacent accessible routes.

Passenger Loading Zones

- Passenger loading zones shall provide a vehicular pull-up space 96 inches wide minimum and 20 feet long minimum
- Passenger loading zones shall provide access aisles adjacent to the vehicles pull-up space; they shall adjoin an accessible route and shall not overlap the vehicular way
- Access aisles shall be 60 inches wide minimum, extend the full length of the vehicles pull-up spaces they serve, and be marked so as to discourage parking in them
- Slopes not steeper than 1:48 shall be permitted.

- Vehicle pull-up spaces, access aisles serving them, and a vehicular route from an entrance to the passenger loading zone, and from the passenger loading zone to a vehicular exit shall provide a vertical clearance of 114 inches minimum

Telephones

- A clear floor/ground space shall be provided; it shall not be obstructed by bases, enclosures or seats.
- Where a parallel approach is provided, the distance from the edge of the telephone enclosure to the face of the telephone unit shall be 10 inches maximum
- Where a forward approach is provided, the distance from the front edge of a counter within the telephone enclosure to the face of the telephone unit shall be 20 inches maximum
- The cord from the telephone to the handset shall be 29 inches long minimum
- Public telephones required to have volume controls shall be equipped with a receive volume control that provides a gain adjustable up to 20 dB minimum. For incremental volume control, provide at least one intermediate step of 12 dB of gain minimum. An automatic reset shall be provided.

Benches

- Clear floor or ground space shall be provided and shall be positioned at the end of the bench seat and parallel to the short axis of the bench
- Benches shall have seats that are 42 inches long minimum and 20 inches deep minimum and 24 inches deep maximum
- The bench shall provide for back support or shall be affixed to a wall. Back support shall be 42 inches long minimum and shall extend from a point 2 inches maximum above the seat surface to a point 18 inches minimum above the seat surface. Back support shall be 2 1/2 inches maximum from the rear edge of the seat measured horizontally
- The top of the bench seat surface shall be 17 inches minimum and 19 inches maximum above the finish floor or ground
- Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds is applied at any point on the seat, fastener, mounting device, or supporting structure
- The surface of the seat shall be slip resistant and shall not accumulate water

Signs

- Raised characters shall be 1/32 inch minimum above their background
- Characters shall be uppercase
- Characters shall be sans serif; characters shall not be italic, oblique, script, highly decorative or of other unusual forms
- Characters shall be selected from fonts where the width of the uppercase letter “O” is 55% minimum and 110% maximum of the height of the Uppercase letter “T”

- Character height measured vertically from the baseline of the character shall be 5/8 inch minimum and 2 inches maximum based on the height of the Uppercase letter “I”
- Stroke thickness of the uppercase letter “I” shall be 15% maximum of the height of the character
- Where characters have rectangular cross sections, spacing between individual raised character shall be 1/8 inch minimum and four times the raised character stroke width maximum; characters with other cross sections spacing between individual raised characters shall be 1/16 inch minimum and 4 times the raised character stroke width maximum at the base of the cross sections and 1/8 inch minimum and 4 times the raised character stroke width maximum at the top of the cross sections; characters shall be separated from raised borders and decorative elements 3/8 inch minimum
- Spacing between the baselines of separate lines of raised characters within a message shall be 135% minimum and 170% maximum of the raised character height
- *Braille*: Braille shall be contracted (Grade 2)
- Braille dots shall have a domed or rounded shape
- Braille shall be positioned below the corresponding text. Braille shall be separated 3/8 inch minimum from any other tactile characters and 3/8 inch minimum from raised borders and decorative elements.
- Tactile characters on signs shall be located 48 inches minimum above the finish floor, measured from the baseline of the lowest tactile character and 60 inches maximum above the finish floor, measured from the baseline of the highest tactile character
- Where a tactile sign is provided at a door, the sign shall be located alongside the door at the latch side; where a tactile sign is provided at double doors with two active leaves, the sign shall be located to the right of the right hand door; where a tactile sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf.
- Signs containing tactile character shall be located so that a clear floor space of 18 inches minimum by 18 inches minimum centered on the tactile characters is provided beyond the arc of any door swing between the closed position and 45 degree open position.
- *Visual characters*: characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background or vice versa
- Characters shall be conventional in form
- Characters shall be selected from fonts where the width of the uppercase letter “O” is 55% minimum and 110% maximum of the height of the uppercase letter “I”
- Visual characters shall be 40 inches minimum above the finish floor
- Stroke thickness of the uppercase letter “I” shall be 10% minimum and 30% maximum of the height of the character
- Spacing between individual characters shall be 10% minimum and 35% maximum of character height.
- Spacing between the baselines of the separate lines of characters within a message shall be 135% minimum and 170% maximum of the character height
- *Pictograms*: pictograms shall have a field height of 6 inches minimum. Characters and Braille shall not be located in the pictogram field.
- Pictograms and their field shall have a non-glare finish. Pictograms shall contrast with their field

- Pictograms shall have text descriptors located directly below the pictogram field.
- Symbols of accessibility and their background shall have a non-glare finish. Symbols of accessibility shall contrast with their background

703.3.1 Braille Dimensions

Measurement Range	Minimum in Inches Maximum in Inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell ¹	0.090 (2.3 mm) to 0.100 (2.5 mm)
Distance between corresponding dots in adjacent cells ¹	0.241 (6.1 mm) to 0.300 (7.6 mm)
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below ¹	0.395 (10 mm) to 0.400 (10.2 mm)

1. Measured center to center.

703.5.5 Visual Character Height (text version)

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	less than 72 inches (1830 mm)	5/8 inch (16 mm)
	72 inches (1830 mm) and greater	5/8 inch (16 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1830 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	less than 180 inches (4570 mm)	2 inches (51 mm)
	180 inches (4570 mm) and greater	2 inches (51 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4570 mm)
greater than 120 inches (3050 mm)	less than 21 feet (6400 mm)	3 inches (75 mm)
	21 feet (6400 mm) and greater	3 inches (75 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

Drinking fountains/water coolers

- Spouts shall not be higher than 36 inches: measured from floor to the spout outlet
- Spouts should be at the front of the fountain and direct water in a manner parallel or nearly parallel to the front of the fountain.

- The spout shall be located 15 inches minimum from the vertical support and 5 inches maximum from the front edge of the unit, including bumpers
- The spout should have a flow of water of at least 4 inches high and no more than 5 inches from the front of the unit
- Accessible drinking fountains with a round/oval bowl must have a flow of water from the spout within 3 inches of the front of the fountain
- Spouts less than 3 inches from the front of the unit shall have a water stream of 30 degrees maximum; spouts 3-5 inches from the front of the unit shall be 15 degrees maximum.
- Controls/operating mechanisms shall be operable with one hand, shall not require tight gripping, pinching or twisting of the wrist, and shall not require a force of greater than 5 lbs. to activate the controls

Toilet and Bathing Rooms

- Turning space of 60 inches diameter minimum. T-shaped spaces within a 60 inch square minimum with arms and base 36 inches wide minimum. arms should be clear of obstructions (doors may swing into the spaces)
- Doors may not swing into clear floor space or clearance required for any fixture
- Mirrors need to be installed with the bottom edge of the reflecting surface 40 inches maximum above the floor. If the mirror isn't above a countertop, the bottom edge should be 35 inches maximum above the ground. Full length mirrors need to be 74 inches minimum from the floor
- Coat hooks need to be located within one of the reach ranges: Unobstructed reach- 48 inches maximum to 15 inches minimum above ground; obstructed high reach- 48 inches where the reach depth is 20 inches maximum if the depth exceeds 20 inches, the reach will be 44 inches maximum and the depth shall be 25 inches maximum; unobstructed side reach- the high side reach shall be 48 inches maximum and low side reach will be 15 inches minimum above the ground; Obstructed side reach- height of the obstruction shall be 34 inches maximum and the depth shall be 24 inches maximum, the reach shall be 48 inches maximum for a depth of 10 inches maximum unless the depth exceeds 10 inches then the reach shall be 46 inches maximum for a depth no greater than 24 inches.
- Shelves shall be located 40 inches minimum and 48 inches maximum above the floor
- Wheelchair accessible toilet compartments shall be 60 inches wide minimum measured perpendicular to the side wall and 56 inches deep minimum for wall hung water closets and 59 inches deep minimum for floor mounted water closets measured perpendicular to the rear wall
- Door openings shall have a clear width of 32 inches minimum. Openings more than 24 inches deep shall provide a clear opening of 36 inches minimum. There shall be no projections into the required clear opening width lower than 34 inches above the ground.

404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

Type of Use / Minimum Maneuvering Clearance

Approach Direction: From front

Door or Gate Side: Pull

Perpendicular to Doorway: 60 inches (1525 mm)

Parallel to Doorway: 18 inches (455 mm)

Approach Direction: From front

Door or Gate Side: Push

Perpendicular to Doorway: 48 inches (1220 mm)

Parallel to Doorway: 0 inches (0 mm) Add 12 inches (305 mm) if closer and latch are provided.

Approach Direction: From hinge side

Door or Gate Side: Pull

Perpendicular to Doorway: 60 inches (1525 mm)

Parallel to Doorway: 36 inches (915 mm)

Approach Direction: From hinge side

Door or Gate Side: Pull

Perpendicular to Doorway: 54 inches (1370 mm)

Parallel to Doorway: 42 inches (1065 mm)

Approach Direction: From hinge side

Door or Gate Side: Push

Perpendicular to Doorway: 42 inches (1065 mm) Add 6 inches (150 mm) if closer and latch are provided.

Parallel to Doorway: 22 inches (560 mm) Beyond hinge side.

Approach Direction: From latch side

Door or Gate Side: Pull

Perpendicular to Doorway: 48 inches (1220 mm) Add 6 inches (150 mm) if closer is provided.

Parallel to Doorway: 24 inches (610 mm)

Approach Direction: From latch side

Door or Gate Side: Push

Perpendicular to Doorway: 42 inches (1065 mm) Add 6 inches (150 mm) if closer is provided.

Parallel to Doorway: 24 inches (610 mm)

- If approach is is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches minimum.
- Doors shall be self-closing, and a door pull shall be placed on both sides of the the door near the latch.
- The front partition and at least one side partition shall provide a toe clearance of 9 inches minimum above the finish floor and 6 inches deep minimum beyond the compartment-side face of the partition, exclusive of partition support members.
- A side-wall grab bar shall be provided and shall be located on the wall closest to the water closet as well as a rear-wall grab bar shall be provided.
- Grab bars shall have an outside diameter of 1.25 inches minimum and 2 inches maximum; grab bars with a non circular cross section shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum.
- The space between the wall and the grab bar shall be 1.5 inches. The space between the grab bar and projecting objects below and at the ends shall be 1.5 inches minimum. The space between the grab bar and projecting objects above shall be 12 inches minimum.
- Grab bars shall be installed in a horizontal position, 33 inches minimum and 36 inches maximum above the finish floor measured to the top of the gripping surface.
- Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

Seats

- The rear edge of a rectangular seat shall be 2.5 inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The side edge of the seat shall be 1.5 inches maximum from the adjacent wall
- The rear edge of an L-Shaped seat shall be 2.5 inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The rear edge of the L portion of the seat shall be 1.5 inches maximum from the wall and the front edge shall be 14 inches minimum and 15 inches maximum from the wall. The end of the L shall be 22 inches minimum and 23 inches maximum from the main seat wall.
- Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds is applied at any point on the seat, fastener, mounting device, or supporting structure.

Important Points from Meeting with Jennifer Skuski from the National Center for Accessibility

- Be very careful in the selection of playground components to make sure they actually meet ADA specifications
- “What could parents do with their child?”
 1. surfacing for all swings
 2. OPTIONS available to consumers
- She will do consultation and help find people in those departments (for free)
- Above and Beyond APA!
- We need to be Original in our design!
- Multiple ways to access equipment!
- We need to be purposeful in our selection of plants
- She told us about the sand area and table which needed an access area/transfer point.
- Playtables of multiple heights are also a must!
- Nitch areas (quiet areas) are beneficial for everyone
- Smarty Surfacing
- Need to keep maintenance and maintenance costs in mind
- Contract is very important- lowball bids from mom and pop operations
- Sitting down, supervision and shade are very important
- Ramp down into our sand pit with wide curves and different levels of sides for different heights.
- Contractor issues-examples of contractors taking matters into their own hands when discrepancies happen and making things inaccessible
- Clear floor spaces and high-low combinations for playscape components

Ideas from the Steering Committee

Recreation Projects

- Project Design-committee ideas
 - Lots of choices for children
 - Different textured objects
 - Auditory
 - Visually stimulating

- Physically stimulating
 - Opportunities for inclusion
 - Relaxation/quiet, regrouping area
 - Interaction with nature- therapeutic garden
 - Climbing
 - “Monroe County” theme: artistic carving of limestone with Braille
 - Log cabin castle
 - Enclosed trampoline
 - Suspended sandbox
 - Talk tubes
 - Ballpit
 - Funhouse mirrors
 - Fenced perimeter
- Project Design- Parent/citizen ideas
 - Magnets
 - Tetherball
 - Wide, paved paths
 - Rocking horses
 - Obstacle course
 - Balance beam
 - Tic-tac-toe
 - Reclining swings with belts
 - Push pin devices
 - Merry-go-round with accessibility for wheelchairs
 - Two-story play area with direct, second-story access
 - Lights for the daytime and the evening for persons with visual impairments
 - Accessible ramps for climbing
 - Numerous sheltered areas
 - Need an outdoor water feature
 - Adult playground with rope swings
 - Butterfly garden/bird habitats/pond areas
 - Huge, accessible bathrooms
 - Day programming/adult day care
 - Stretching and areas with pressure wraps
 - Concrete paths around places of interest
 - Hiking trails

Fundraising contacts

- Physical therapists
- YMCA
- Bloomington Hospital Foundation and Women’s Auxiliary

- Waldren Art Center
- Wonderlab
- CVS Pharmacy
- Best Buy
- Warren Buffet
- Millionaires.com
- Local gov't
- Indiana Grantmaker's Search
- Community Fundraisers
- Community Foundation
- Cook Foundation
- Annie Casey Foundation
- Kennedy Foundation
- Pulliam Foundation
- Girl Scouts
- Monroe Hospital
- Various local vendors biotech equipment
- Christole
- Stonebelt

Fundraising- ideas

- Link on webpages
- Sell sculptures
- Sell bricks to place at playground in a “veteran’s section”
- Wal-Mart day

Assessment of need

- Survey
 1. 88.2% of people surveyed said there was not enough recreational opportunities for people with disabilities in Monroe County
 2. Suggested numerous improvements which needed to be made to existing recreational opportunities in Monroe County

	Too few	Too many	Just right	Don't know
Indoor physical recreation opportunities for people with special physical needs	58.80%	0	8.80%	32.40%
Outdoor physical recreation oppportunities for people with special physical needs	68.80%	0	15.60%	15.60%
Places to appreciate nature	50%	0	50%	0
Accessible family restrooms	56.30%	0	28.10%	15.60%
Accessible picnic areas with tables indoors	54.50%	0	18.20%	27.30%
Accessible picnic areas with tables outdoors	45.50%	0	30.30%	24.20%
Accessible playground eequipment	75.80%	0	18.20%	6.10%
Safe resting and lounging areas indoors	62.50%	0	6.30%	31.30%
Safe resting and lounging areas outdoors	65.60%	0	9.40%	25%