Learning Objectives

After reading this article, you should be able to:

1. Examine the history and emergence of playgrounds from the early 1900s.
2. Assess the rise of safety and surfacing as a concern for North American playground designers.
3. Describe modern playground equipment and its impact on the health and development of all children.
4. Explore the sustainable aspects of playground design, including earning points for LEED certification.
5. Discuss emerging playground trends.

The Evolution of North American Playgrounds From 1900 to the Present and Beyond

How architects, landscape architects, child-development experts, and equipment designers have revolutionized outdoor play

Sponsored by Little Tikes Commercial | By Kathy Price-Robinson

Prior to 1900, there were virtually no playgrounds in North America. As population moved from farms to cities, playgrounds were seen as a way to keep children busy and out of trouble. Since then, both the art and practice of playground design have expanded to include safety, accessibility, and inclusivity, and to encompass and foster child development. Playgrounds have helped earn points for LEED and other certifications, and equipment manufacturers have adopted sustainability programs. This course looks at the architect’s and landscape architect’s roles in the past, present, and future of playground design and specification.
While the concepts remain similar—providing a place for fun outdoor activity—playgrounds over the century have become more varied, interesting, inclusive, accessible, and safe.

**EMERGENCE OF PLAYGROUNDS FROM THE EARLY 1900S**

Children have always played. Ancient pictographs, artifacts, and written history affirm that outdoor physical play has been an enduring, critical element of human development.

Even in animals, play is critical to development. Baby lions, bears, and wolves tumble, wrestle, and learn how to move, balance, and interact, gaining strength and awareness of themselves and their environment while learning skills for future survival. For humans, the value of outdoor physical play is long established as being critical for development of physical strength, creativity, and social skills.
However, outdoor physical play now competes with activities stemming from overly scheduled households, and even toddlers have become captivated with the fascinations of the digital world of tablets, cell phones, and online gaming. Sitting hour after hour after hour immersed in these pastimes, the child fails to develop some of the most basic skills. And as outdoor recess times in school playgrounds are increasingly cut in favor of other priorities, children sit even more. The results could be disastrous.

This article discusses the history of outdoor physical play, particularly the playgrounds of the past century, how those playgrounds evolved to become safer and more inclusive, and how designers and playground equipment manufacturers have worked together toward those goals. Finally, we’ll discuss the playgrounds of the future and how today’s “child-saving movement,” reminiscent of the one at the turn of the previous century, seeks to return children to their rightful place, playing outdoors and enjoying the same opportunities for development that most of us enjoyed prior to the digital revolution.

**Play Deprivation in the News**

An excerpt from the Washington Post article titled “The decline of play in preschoolers—and the rise in sensory issues,” in which the writer interviewed the director of a progressive preschool, reads:

“Kids are just different. They are more easily frustrated—often crying at the drop of a hat.’ The director had also observed that children in classrooms frequently fall out of their seats ‘at least three times a day,’ that they are less attentive, and that they are running into each other, and even running into walls. ‘It is so strange,’ the preschool director said. ‘You never saw these issues in the past.’”

The problem is widespread. In Europe, a BBC News article titled “Generation of Play Deprivation” quotes statistics from Play England, an agency dedicated to encouraging play, showing that while 71 percent of parents had played outside their homes, only 21 percent of their children were allowed that independence.ii

The article quoted British play specialist Penny Wilson: “I’m really frightened about that generation of children who are growing up without having played.” Wilson has been hired to advise on projects in New York, Chicago, and Washington. Those cities are, she says, “trying to reintroduce the concept of play.”

An article in the New York Times titled “Sitting Is Bad for Children, Too,” warns, “Children who sit too much may face adult-size health consequences.”iii And a study reported in the Journal of the American Medical Association shows that increasing time spent outdoors reduces the incidence of myopia in children.”

According to Joe L. Frost, professor emeritus at the University of Texas and author of "A History of Children’s Play and Play Environments: Toward a Contemporary Child-Saving Movement,” we are at a crisis point. Frost wrote:

“Now, for the first time in history, the children of entire industrialized nations, especially North American children, are losing their natural outdoor grounds for play and forgetting how to engage in free, spontaneous outdoor play. The consequences are profound.”

The basic physical, emotional, and spatial development of children through outdoor physical play is no longer a given.
History of Play
In North America, play was an established childhood activity long before European settlers arrived. Games among Native Americans were played to imitate such adult activities as hunting, gathering, and protecting the tribe. Even later, when settler children worked on the farm, there was time left in the day to play in the fields and streams and to interact with the farm animals.

During the early 1900s, as a great migration began from farms to cities and from other nations to North America, the country felt a lack of play spaces. While some children took to playing in empty and abandoned lots, many tried to play in the streets, which was dangerous. In New York City, eventually, playing ball in the street was outlawed. While parks and playgrounds seem to us as natural as wind and sun, there was a time in North America when the idea of a public city park for play and recreation was a foreign concept.

Over time, in an effort to provide city children a safe place to play and keep them away from dangerous city elements, concerned citizens started what was known as the "child-saving movement." As part of that effort, lands for public parks were set aside and developed.

Early Playgrounds
The early playgrounds in North America were very different from those we know today. On these first playgrounds, play was composed of directed activities under adult supervision, unlike the free and spontaneous play on today’s playgrounds. Early playgrounds also had showers and places for art and creative work.

During the Great Depression in the 1930s, the focus on playgrounds ceased because the country was broke and broken.

The years during World War II saw all resources devoted to the war and much sacrifice on the part of citizens to fuel the war efforts. While the creation of parks and playgrounds slowed down or ceased during those years, children's play did not.

The building of playgrounds accelerated after President Franklin Delano Roosevelt created millions of jobs with The New Deal. Many of the parks and amenities created during this time of huge investment still exist today.
In the middle of the 20th century, the pendulum of organized play on playgrounds swung very far in the other direction. During that time, the belief grew that children should in fact not be controlled and directed, but should have places to be creative on their own terms. Thus, "junk playgrounds" emerged. These were spaces with natural elements, such as hills and trees and plants, and also piles of junk that kids could use in creative ways to make forts or other imaginary places to playact. Over time, these playgrounds were deemed too dangerous and eventually faded from favor, though some still exist, especially in other countries.

Playgrounds tend to mimic and reflect the themes of the day. In the 1950s and 1960s, during the Cold War tensions with Russia and Cuba and the country’s obsession with space travel and missiles, playground equipment was created and shaped like rockets and airplanes. Some of those playgrounds still exist today.

Notable Playground Designers
Throughout the history of playgrounds, designers and architects have played a major role, delighting children of yesteryear and inspiring playground designs even today.

In 1966, architect Richard Dattner designed the iconic and very popular Adventure Playground, one of 20 playgrounds in New York’s City’s Central Park. The space just north of the West 67th Street entrance includes a granite-faced play structure that is a place to climb, a place to hide, and a maze. A massive stepped wooden pyramid topped with fitness bars gives children many ways to slide down. A low wall surrounding and defining the playground gives parents and caregivers a place to sit. The whimsical playground was in sharp contrast to the somewhat staid playgrounds of the Works Progress Administration (WPA) in the 1930s.
The very popular Adventure Playground, designed by architect Richard Dattner, was built in New York City’s Central Park.

“An environment that provides only the familiar challenges that already have been overcome countless times will never call forth any new learning,” Dattner wrote in his 1969 book Design for Play.

Landscape architect M. Paul Friedberg also broke from the typical design of playgrounds in the 1960s with a series of spaces that included such adventurous features as tunnels, mounds, and tree houses.

“The choice of what to do next becomes an experience,” Friedberg wrote in his 1970 book Play and Interplay. “The more complex the playground, the greater the choice and the more enriched the learning experience.”

THE RISE OF SAFETY STANDARDS FOR NORTH AMERICAN PLAYGROUNDS

As playgrounds came to be built, accidents began to happen. Children, as they are learning how to use and move their bodies, are bound to have accidents.

Each year, more than 200,000 U.S. children end up in hospital emergency rooms with injuries from using playground equipment. According to the U.S. Consumer Product Safety Commission (CPSC), most injuries occur when a child falls from the equipment onto the ground.

And so along with incidents of injury came standards to create safer environments.

The CPSC, whose playground safety standards are considered the industry norm, has created a checklist to ensure a local community or school playground is a safe place to play:

- Make sure surfaces around playground equipment have at least 12 inches of wood chips, mulch, sand, or pea gravel, or are mats made of safety-tested rubber or rubber-like materials.
- Check that protective surfacing extends at least 6 feet in all directions from play equipment. For swings, be sure surfacing extends, in back and front, twice the height of the suspending bar.
- Make sure play structures more than 30 inches high are spaced at least 9 feet apart.
• Check for dangerous hardware, like open “S” hooks or protruding bolt ends.
• Make sure spaces that could trap children, such as openings in guardrails or between ladder rungs, measure less than 3.5 inches or more than 9 inches.
• Check for sharp points or edges in equipment.
• Look out for tripping hazards, like exposed concrete footings, tree stumps, and rocks.
• Make sure elevated surfaces, like platforms and ramps, have guardrails to prevent falls.
• Check playgrounds regularly to see that equipment and surfacing are in good condition.
• Carefully supervise children on playgrounds to make sure they are safe.

Americans with Disabilities Act: As any architect, designer, or builder knows, the Americans with Disabilities Act (ADA) is a civil rights law that prohibits discrimination on the basis of disability. In 2000, the Architectural and Transportation Barriers Compliance Board issued accessibility guidelines for new construction and alterations of play areas. These guidelines were adopted into law in 2010. As of March 15, 2011, all play areas must be in compliance with these guidelines.

ASTM: Likely all architects, designers, and builders are familiar with the American Society for Testing and Materials (ASTM), which has developed more than 12,500 voluntary consensus standards under the guidance of 140 technical standards-writing committees that represent many diverse industries. But some in the design-build industry may not be aware of the standards created specifically for playgrounds.

The following standards are considered the most important that deal with playgrounds:

• ASTM F1148: Home Playground Equipment
• ASTM F1487: Public Use Playground Equipment
• ASTM F2373: Under Two Play Equipment
• ASTM F1292: Playground Surfacing
• ASTM F2049: Fencing
• ASTM F1816: Drawstrings on Children’s Upper Outerwear
• ASTM F1918: Soft Contained Play Equipment
• ASTM F2088: Infant Swings

The producers of playground equipment should meet the standards and provide written material to indicate that they have tested their products in an independent lab and that they meet the standards involved. If they do not pass, the products should not be produced.

At the state level, lawmakers have passed legislation or regulations to improve safety on playgrounds. The following states have adopted all or parts of CPSC or ASTM.

Arkansas: The CPSC guidelines were adopted as the standard for outdoor play areas for early childhood programs funded under the Better Chance Program. Sections of CPSC were also adopted for regulations concerning licensing of childcare facilities.

California: This state adopted CPSC guidelines for all public playgrounds. The statewide regulations must include special provisions for childcare settings and address the needs of the developmentally disabled. California Code of Regulation's Title 22: Safety Regulations for Playgrounds provides detailed specifications for the design, installation, and maintenance of public playgrounds, referencing compliance with CPSC and ASTM guidelines as mandatory.
Connecticut: CPSC guidelines have been adopted as voluntary for public use playgrounds.

Florida: Florida’s Child Care Standards include playground safety. Florida’s Child Care Standards (F.A.C. 65C-22.003) include playground safety in the list of potential courses required to be taken by childcare providers.

Illinois: Licensing standards for childcare centers require that protective surfacing be in compliance with CPSC guidelines. Illinois’ licensing standards for day care centers spells out requirements for playground equipment at day care centers. The standards require that protective surfacing be in compliance with CPSC guidelines.

Michigan: This state requires that all new playground equipment must meet CPSC and ASTM specifications. Civil penalties are imposed for those who violate these specifications for manufacturing or assembling playground equipment.

New Jersey: CPSC guidelines have been adopted for public use playgrounds in New Jersey, with rules and regulations for the design, installation, inspection, and maintenance of playgrounds.

North Carolina: Sections of the CPSC guidelines have been adopted in childcare facilities, including use zones and surfacing, age and developmentally appropriate equipment, and prohibitions of protrusions and entrapments. These state requirements also prohibit the use of gravel for surfacing if the area will serve children less than 3 years of age.

Oklahoma: Oklahoma’s Child Care Standards include playground safety but make no mention of CPSC guidelines; rather, the standards include fall zones of at least 6 feet for all equipment except for swings, which require a fall zone a distance twice the length of the swing’s chain. The regulations also include entrapment and entanglement hazard prevention, as well as swing seat composition requirements.

Rhode Island: Rhode Island requires that public school playgrounds—including equipment and surfacing—comply with CPSC guidelines. Bond money was allocated to remove old, dangerous equipment and install new, safer playgrounds.

Tennessee: Tennessee’s Child Care Standards suggest that childcare centers use CPSC guidelines for guidance on playground construction and maintenance, but compliance is not required. Tennessee rules state that fall zones should be between 4 and 6 feet, which is not in compliance with CPSC guidelines, which require a minimum of 6 feet. However, the Tennessee rules for playground surfacing require that surfacing type and depth is in compliance with CPSC’s guidelines.

Texas: Texas requires compliance with the CPSC guidelines for the purchase and installation of new playground equipment and surfacing if public funds are used.

Utah: Licensing for childcare centers require that the protective surfacing must comply with CPSC guidelines and ASTM standards. The rules also require a fall zone of 6 feet surrounding all playground equipment.

Virginia: Virginia’s childcare standards include playground safety. The Minimum Standards for Licensed Child Day Centers for Virginia (22 VAC 15-30-310) require that a center develop written playground safety procedures, which must include provision for active supervision by staff and a method of maintaining resilient surfacing.
Wyoming: Wyoming’s regulations cover childcare centers and family childcare homes. Rules address outdoor play space size, supervision, surfacing, use zones, and equipment. Wyoming also has standards for weather conditions and natural environment of play areas.

Evolution of Surfacing
The earliest playgrounds, sometimes fashioned from vacant city lots, were situated on asphalt or hard-packed dirt. As injuries occurred and continued, guidelines were developed to make falling safer for children.

According to the CPSC, unacceptable surfacing beneath playground equipment includes asphalt, most carpeting, concrete, dirt, grass, and wood mulch treated with cremated copper arsenate (CCA), a preservative known to cause cancer.

Advancements in shock-absorbing surfacing have made playgrounds safer than those built on concrete, asphalt, or packed earth. In many areas, advanced surfacing is required by building standards and codes, particularly for public and school playgrounds.

According to the CPSC, there are two options available for surfacing public playgrounds: unitary and loose-fill materials.

Unitary materials are typically rubber mats and tiles or a combination of energy-absorbing materials held in place by a binder. The material might be poured in place at the site and then cured. This forms a unitary, or one-piece, shock-absorbing surface.

Newly developed surfacing materials, such as combinations of loose-fill and unitary, should be tested to ASTM F1292. It’s important keep in mind that some darker-colored surfacing materials can become extremely hot when exposed to the intense sun and can cause blistering on bare feet (proper footwear is strongly recommended when using play equipment). In hotter climates, the architect, landscape designer, or specifier should choose lighter-colored materials or provide shading to cut down on direct sun exposure.

Before specifying a unitary material as a playground surface, ask the manufacturer for ASTM F1292 test data that will identify the critical height rating of the desired surface. Some unitary systems require professional installation.
MODERN PLAYGROUND EQUIPMENT AND ITS IMPACT ON THE DEVELOPMENT OF ALL CHILDREN

Modern playground equipment provides a much richer, developmentally advanced play environment than the original swings, slides and merry-go-rounds that comprised playgrounds in the past century. There are many factors that advanced the developmental impact of play equipment on children. Studies into childhood development have increased in number and sophistication. Because of the increasing incidents of sensory processing disorders, researchers have been focusing on how to help children with these challenges develop and cope in the world.

A modern playground in San Clemente, California, has a castle theme and provides places for play on upper and ground levels.

Playground interaction can have profound impacts on the development of children. This ranges from physical to cognitive to social impacts. Modern playground equipment promotes cognitive development in the form of roleplaying, discovery, and critical thinking. Social skills are developed with interaction, sharing, and participation.

Unlike formal school studies or hours at a desk, play on outdoor equipment whose design has been influenced by doctors, therapists, architects and designers helps children develop their sense of balance, self-awareness, and even social skills, giving them a better chance for success in adulthood.

Inclusive Playground Equipment

Inclusive playgrounds bring benefits on several levels. Most importantly, children with limited abilities are able to join in play activities with all children, rather than being segregated into special areas. In addition, children with full abilities learn acceptance of differences as their limited-ability peers play alongside.
This playground provides fun outdoor activity for all children no matter their physical or sensory abilities. The playground provides shade for hot days and places for children to sit when needed within the play environment.

It is important to understand the difference between ADA-accessible playgrounds and inclusive playgrounds. The former comply with the American Disabilities Act, which states that all public playgrounds should be accessible to children with limited physical abilities, such as those who use wheelchairs to move around. However, inclusive playgrounds expand on that to actively include children with challenges such as autism and other sensory processing disorders (SPDs).

Examples of playground equipment that is both accessible and inclusive include:

**Activity panels:** These allow children to express themselves through music, mental exercises, and exploration. Whether learning about rhythm, sound, and pitch or moving steering wheels or colorful balls across the panel to promote hand coordination in a playful way, accessible-height activities encourage range-of-motion exercise and imaginative play.

**Talking tubes:** These allow for downtime when children need to get away from the noise of the playground while still engaging in one-on-one play from a distance.

**Ramps with double rails:** These allow for continuous gripping support, wheelchair-turning areas, and transfer stations.

**Wheelchair-accessible gliders:** These feature a gentle swaying motion and large deck surface for wheelchairs.

**Therapeutic rings:** These provide upper-body exercise and stretching, and improve both strength and mobility, helping children do more for themselves on and off the playground.

**SUSTAINABLE PLAYGROUND DESIGN**

To document sustainability and adherence to standards, some playground equipment manufacturers have earned ISO 9001, 14001, and 18001 certifications. Increasingly, a number of companies have made commitments to environmentally friendly manufacturing, improving their green business practices and reducing their carbon footprint. These ISO certifications ensure that companies from whom a landscape designer or architect might specify equipment meet standards for quality, environmental responsibility, health, and safety in the manufacturing processes.
A sustainable playground can also contribute points to achieve a rating for the LEED (Leadership in Energy and Environmental Design) program of the U.S. Green Building Council. While categories, credits and points can change from one version of LEED to the next, here are some broad guidelines to consider:

**Alternative transportation:** Provide secure parking for bicycle users, including bike racks. This decreases the impacts to land development by promoting an alternative mode of transportation to automobiles.

**Site master plan:** Ask the manufacturer to provide site layouts with the playgrounds integrated into landscape architects. These plans should include parking, paving, and surface covering under the playground area.

**Storage and collection of recyclables:** Use litter receptacles made of recycled materials. For example, one manufacturer’s receptacles are made from redwood and 100 percent recyclable aluminum waste cans. These provide users the opportunity to use marked waste receptacles for recyclable materials, reducing waste generated for landfills.

**Construction waste management:** Look for an installation team that is fully trained to recycle all packing materials and crates per each city’s regulations, which eliminates the use of landfills and incinerators for disposal of construction materials. Consider manufacturers who use cardboard, wood, polyethylene and polypropylene banding, and PVC film, all of which are recyclable in many markets.

**Materials reuse:** Seek out manufacturers offering recycled materials. Some playground equipment material, including surfacing, is made from 100 percent recycled materials.

**Regional materials:** Investigate plant locations of manufacturers to assess transportation issues.

**Innovation and design:** Many manufacturers offer programs that help teachers or others enhance the value of play for children while using their equipment.

**THE FUTURE OF PLAYGROUNDS**

As we have seen, the evolution of playgrounds from the early 1900s to today has been extraordinary. We’ve seen the gradual shift from simple swings and slides to sophisticated equipment designed to impact and influence the development of children of all abilities. Just as the past decades have seen many changes in playgrounds, the next decades will surely be filled with innovations. Here are some trends to be aware of.
The evolution of playgrounds over the past century has been significant.

**Innovative New Play Equipment**
Designers, manufacturers, physical therapists, and child-development specialists continue the quest for new equipment that can inspire and excite children and promote their robust development.

Some new types of equipment may include:

This piece of equipment helps develop the user’s balance and strength, as well as encourages risk-taking.
Cable rides: Zip lines that seem to be increasingly popular in society inspire this piece of equipment. A playground cable ride provides a controlled yet thrilling ride for children who want to soar. This type of equipment helps develop balance and strength, and allows children to practice risk taking, perhaps with the support and cheering on of peers, which develops teamwork.

Tire-like equipment: New types of play equipment might well evoke the junk playgrounds of the past. Tire-like equipment is fun to climb over, climb through, and balance on. Whereas actual tires might not be chemically safe for children to touch and play upon, playground equipment designed to look like tires will be.

Photo courtesy of Little Tikes Commercial
This equipment functions like an old tire, but is safer.

Custom-themed Playgrounds
Custom-themed playgrounds are becoming more popular. While playgrounds in the 1960s reflected the space program, for instance, those in the future may reflect societal trends in the future, or even reflect the distant past.
CASE STUDY: DINOSAUR-THEMED PLAYGROUND

Consider the playground at Olympus Park in Roseville, California. The idea for the dinosaur theme came about when playground designer Glen Wurster of All About Play met with city staff to discuss replacing an existing playground. The designer noticed a dinosaur climber, and that sparked the idea to design the whole playground with that theme.

This dinosaur-themed playground is in Roseville, California.

Wurster worked with a leading equipment company’s design team to create a one-of-a-kind playground. It stimulates the imagination by evoking a land from long, long ago. Features include a soaring pterodactyl and lifelike reproductions of mammoth fossils. As is the goal with all good playgrounds, children do not even realize their senses and social skills are being developed as they crawl, climb, swing, and slide on giant hanging dinosaur eggs, a safari “Jeep,” a double-wide slide, a climbing rock, and other features.

Playgrounds That Reflect the Local Community and Its Heritage

Increasingly, playground equipment companies offer ways for playground designers to create environments that reflect the local community and local customs, colors, shapes, and mindsets.
CASE STUDY: PLAYGROUND DESIGN INSPIRED BY CLASSIC FILM

Some playgrounds reflect their local customs and history. A playground inspired by Walt Disney’s classic film “Cinderella” is located in Lakewood, California, just a few miles away from the original Disneyland.iii

![Children play on the custom playground that reflects the classic Walt Disney film “Cinderella.”](image1)

San Martin Park is affectionately known in Lakewood as Pumpkin Park. The playground had contained two pumpkin carriages that for 50 years were a beloved play destination by the community, but safety issues required their removal in the spring of 2014. A request for design was sent by Lakewood to several major manufacturers to submit ideas for the playground renovation, and a representative from a major company conceptualized the initial design and worked closely with the custom and engineering departments to come up with the final design that so perfectly captured the heart and soul of Pumpkin Park.

![A ramp leading into the “castle” is fun and useful for children of all abilities.](image2)
Pumpkin Park has become the favorite park in the city and is a destination for not only the community of Lakewood but for other cities as well. The highlight of the park is the new pumpkin carriage, which is wheelchair accessible and drawn by two large horses. The pumpkin carriage gently sways back and forth in response to its users, allowing children to imagine riding the carriage to their enchanted castle. A large entry arch provides the opening to the castle, where children can continue to explore the castle, or they may choose to take a track ride down to the pumpkin patch. Large orange static pods comprise the pumpkins in the pumpkin patch that children can climb into and around, pretending that one day these pumpkins will become carriages, too.

Reflecting the evolution of playground equipment over the past few decades, the castle design combines inclusive play on the lower decks and more challenging, active play on the back deck sections. At every turn and path there are climbers, slides, and interactive panels. Shade has been provided by a hexagonal shade sail in the center of the castle. There are many other elements for children to explore and discover in the design of this playground, which will be enjoyed for many generations of Lakewood residents.

Architects should take note that playgrounds are not always pre-packaged, off-the-shelf items. Rather, the architect or designer will play a major role in where the playground is placed, what natural assets are left in place, the layout, and choice of equipment depending on the needs of the community.

**Growing Emphasis on Shade**

Health risks to children from sun exposure are real and increasing. Many organizations promote providing shade for children playing outside. More playground designers will specify shade structures over playground equipment. This allows the space set aside for a playground to be used even on hot and sunny days, rather than laying fallow on summer days due to lack of sun protection.

Shade structures are becoming more common in playground design to protect both the children and the equipment, and make the area more comfortable to visit during hot weather.

Shade structures also protect the equipment and surfacing from premature degradation caused by harmful ultraviolet rays. This is especially prevalent in the western and southern parts of the country, where high heat index records are being broken year after year. Examples include Charlotte and Raleigh,
North Carolina, where records were broken in July 2015 with temperatures of 100 degrees Fahrenheit; and in Columbia, South Carolina, where a temperature of 101 degrees Fahrenheit broke a record in the same month. Science has long predicted more intense, more frequent, and longer-lasting heat waves in the 21st century.

Shade structures can be mounted directly into playground posts or used as independent shade equipment. Sun shades help to keep children cool and help reduce exposure to harmful UV radiation, while providing an aesthetically appealing design element. Shade solutions are available in numerous design options and colors. Shade structures can be integrated into the playground equipment, independent structures, or of custom design.

For a quality installation, seek out fabrics with the highest fire resistance rating, and that will tolerate exposure to harsh and extreme outdoor elements. Such fabrics likely conform to and exceed California’s State Fire Marshal flame-retardancy test criteria and the National Fire Protection Association’s NFPA701 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films are ideal.

CONCLUSION
The benefits of outdoor play are undeniable. According to clinical pediatric physician Wendy Pomerantz: “Play helps children develop motor skills. It facilitates interaction between children and others, including parents and caregivers. It helps them learn creative thinking skills and how to solve problems. Children use their imagination during play to engage in the world around them, learning how to solve conflicts, share, and practice grown-up roles. Also, it helps promote happiness.”

Professionals have had a positive influence on the evolution of playgrounds as they have designed and advocated for play spaces designed in the best interest of children. Professionals have brought improvements in safety, design for creative and imaginative play, and made possible accessibility and inclusion of children of all abilities.

There is no doubt that playgrounds are an important part of child development. Outdoor play is essential to the development of all children. On playgrounds, children learn fundamental skills through play that help prepare them to be successful adults, which benefits all of society. Playgrounds have evolved over the past century to become safer, accessible, and more inclusive. Future playgrounds will likely be even more inventive, sustainable, protected by shade structures, and healthier for those children to come.

END NOTES
²http://news.bbc.co.uk/2/hi/uk_news/education/7007378.stm
⁶http://planforplay.centralparknyc.org/slideshows/west_60s_landscape/adventure_playground_6.php
⁷http://playgroundsafty.org/research/injuries
⁹http://www.cpsc.gov/PageFiles/122149/325.pdf
¹⁰http://www.cpsc.gov/PageFiles/122137/270.pdf
Kathy Price-Robinson is a longtime construction and design journalist and a continuing education developer. www.kathyprice.com