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Play Hard

The latest in playground philosophy, design and components

By Dawn Klingensmith

To the thousands of children who have visited since opening day last September, the Children's Garden at the Morton Arboretum in Lisle, Ill., is one giant playground. And it's no wonder, as every last detail—from the 14-foot lookout to fuzzy-leaf plants just begging to be petted—was conceived with kids in mind, says Katherine Johnson, garden manager.

Near the entrance is a one-ton granite sphere engraved with leaf shapes and suspended on high-pressure jets of water. Kids rotate the sphere to align its engravings with matching impressions in the surrounding concrete.

From there, kids enter the Backyard Discovery Gardens, where they can do something that Mom or Rover would put a stop to at home—curl up in a doghouse. Nearby are playhouses gussied up with window boxes, weathervanes, and tot-sized tables and chairs. Moving from one themed area to another, kids can crawl through tunnels, race down side-by-side slides, climb atop a huge acorn, weave in and out of a model tree-root system, and stomp on "lily pads" to make faux frogs spit. A small plot of corn provides the perfect setting for hide-and-seek, and sand-play areas near running water are great for digging and damming.

Brightly colored metal flowers offer a subtle lesson on pollination. The center part of each flower has a bell, xylophone or horn. As kids flit from one noisemaker to the next, a grownup can explain that similar behavior in bees results in new plants. The flowers are stroller-high so the tiniest tots can get in on the action.

Beyond the Backyard Discovery Gardens lies Adventure Woods, where kids can wade in a pond or race corks down a creek. Play structures designed to look like tree houses are connected by wooden and rope bridges. Nearby, a net suspended over tall grass lets kids see what a meadow looks like to a butterfly. But the crown jewel of Adventure Woods is the Canopy Walk, a stroller- and wheelchair-accessible boardwalk that gradually rises into the treetops. On custom-designed play structures contained by rails and rope webbing, kids can make like monkeys, clambering their way through the trees to Evergreen Lookout. The lookout's deck is 14 feet above ground, but because of the way the land slopes away from it, kids get a top-of-the-world sensation and a bird's-eye view of the arboretum.

In many respects, the Morton Arboretum's Children's Garden represents the latest in playground philosophy, equipment and design. Its planners were ahead of the curve on certain playground trends that are just emerging or reemerging, such as site-specific design, interaction with nature, accessibility and the promotion of dramatic play so kids' imaginations, not just their bodies, can run wild. Other aspects of the design, such as the inclusion of water features, educational components and plenty of things to climb on, are established trends that kids can find in newer playgrounds from coast to coast.

And Evergreen Lookout exemplifies an interesting twist on a bandwagon trend in playground design—building play structures so high that kids could practically high-five a passing cloud.

The sky's the limit

Ed Dalton, director of parks for Naperville, Ill., says the skyward trend comes on the heels of a more

cautious era, when heights were kept to a minimum.

"Right now, from what I've seen in the catalogs, it seems like we're going back to taller playgrounds," he says.

Bob Meihaus of Playground Consulting and Design in St. Louis concurs about the pendulum swinging the other way.

"Five years ago, you didn't go above 6 feet in a public park," he says. "Now, you can buy 25-foot mega-towers."

Whatever is driving the trend (competition, consumer demand or both), not every manufacturer is taking part when it comes to height.

"There's a division and two different schools of thought among manufacturers," says Tim Ahern, president-elect of the International Playground Equipment Manufacturers Association. "In my opinion, one doesn't need to go 15 or 18 feet up in the air to have fun."

Meihaus and Ahern both worry that if structures continue to get higher and higher, a corresponding rise in injury rates may result. Indeed, a Canadian study found that among children playing on equipment higher than eight feet, injuries were three times the usual rate.

The Morton Arboretum's Children's Garden is a unique case because the custom-built lookout's height was motivated by a desire to get kids up close to the site's existing trees, which is consistent with the arboretum's educational mission. Moreover, the railed-in Canopy Walk is inaccessible from below so kids can't crawl around on the outside. In contrast, some manufactured mega-structures are prime targets for unintended usage.

In observing children at play on taller equipment, the authors of Developmental Benefits of Playgrounds, available from the Association for Childhood Education International, report seeing kids shinnying atop tunnel slides, walking across the rungs of horizontal ladders, perching on protective railings and climbing on the outside of play structures up to 13 feet tall.

"Children have a unique talent for making a fool out of the best designers," Meihaus says. "With everything you design or create, you have to stand back and think, 'Now, what opportunities for misuse have I created?' If there's a roof 10 feet up in the air, it probably won't be long before you have a kid sitting on it."

While flipping through a recent playground equipment catalog, Dalton pauses over a two-story structure that seems all but impossible to fall from.

"But unfortunately, any time you do something really high, kids aren't necessarily using it the way it was designed to be used," he says, unless supervisors put a stop to it. "Kids will find a way to climb on the outside."

For this and other reasons, Dalton believes the trend toward taller playground structures will have a limited lifespan.

"I think in a few years," he says, "it will swing back so things are lower to the ground."

Let's get physical

Meihaus says increased heights are part of a larger trend—stemming in part from concerns about childhood obesity rates—toward making playgrounds more physically challenging. Climbers, for example, work every major muscle group while providing a mental challenge as well, so not surprisingly, scalable play features of every conceivable size and shape are cropping up in catalogs and playgrounds. Popular varieties including realistic rock structures, climbing walls, spatial net climbers, and new spins on the old metal geodesic or geometric climbers.

Climbers are proven kid-pleasers, especially the ones that simulate real rock climbing. When Westdale Heights Academic Magnet School in Baton Rouge, La., resolved to build a new playground, before putting pen to paper, designers solicited drawings of ideal playgrounds from some 400

students.

"Rock walls were huge," says Kara Frank, project chairwoman. "They all wanted a rock wall to climb on."

The simplest climbing walls are two-dimensional and have holes for handholds and footholds. In many cases, these climbers are attached to play structures to enable children to climb onto a deck. A more sophisticated variation of the climbing wall consists of a vertical, sometimes curvilinear, climbing surface with molded plastic grips mounted into the surface.

Realistic boulder formations—often made from sculpted concrete or fiberglass molded from real rocks for maximum realism—also are key sellers. Some are as large as 12 feet high by 6 feet wide by 10 feet long, but recreation managers are happy to plunk them down in parks because they look natural and get plenty of use, says Ahern, who is also president and CEO of a playground equipment manufacturer.

Sculptural play features, such as the scalable acorns at the Morton Arboretum's Children's Garden, put an artsy twist on climbers. Some playground companies offers climbers shaped like petrified tree stumps and giant baseball mitts. The University of California in Santa Barbara added cement-and-epoxy gorillas to a campus playground. The primates are in a knuckle-dragging stance so kids can clamber on board for piggyback rides.

Spatial nets in three-dimensional web configurations, such as pyramids, rockets or tetrahedrons, also are valued by planners and children for the physical and mental challenge they present, with some soaring as high as 18 feet. Because the high-tension cables flex as kids grab or step on them, movement is transmitted through the system so climbers develop a sharper sense of balance and improved hand-eye coordination.

When buying a climber of any sort, make certain the designers didn't put all their thought into climbing and none into egress, Meihaus cautions, adding that equipment should allow children to descend without jumping. That sounds reasonable and simple enough, but remember that when kids reach the top, there are bodies below them trying to do the same, so exiting gets tricky.

Playground equipment that emphasizes building upper-body strength in particular, and fitness in general, is taking up more and more real estate in playgrounds and manufacturers' catalogs, largely in response to obesity concerns. Circuit play systems are a new class of equipment designed to combine fitness and fun. These systems consist of a variety of ground-level play and fitness components set up like a combination obstacle and agility course, complete with overhead elements, walls to scale and low balance beams that tilt as kids walk across them. Each station works a different muscle group, and the circuit as a whole is deigned to improve balance, agility and stamina. Circuit play systems therefore present kids with a physical and mental challenge without resorting to excessive heights. However, as manufacturers compete to make circuits increasingly challenging, the heavier kids they are meant to help may be physically incapable of using them, Meihaus notes.

What Do Kids Want?

After Westdale Heights Academic Magnet School in Baton Rouge, La., announced plans to build a new playground, before putting pen to paper, designers met with more than 400 students and asked them to draw their ideal playground. In addition to climbing walls, which are relatively new to playgrounds, two tried-and-true components held sway in hundreds of student drawings—slides and swing sets.

"Slides were a big thing, and so were swings," says project chairwoman Kara Frank. "The kids all wanted a tall slide," she adds, though there were variations on the theme: "Some wanted an open slide, some wanted a covered slide, some wanted a spiral slide."

Were all playground designers simply to ask rather than trying to divine what it is that children want, slides and swings likely would be the predominant response, says Bob

Meihaus of Playground Consulting and Design in St. Louis. "Invariably, kids want swings," he says, but nowadays it seems they're less likely to get them.

Today's stricter safety standards call for costly surfacing around swing sets to cushion falls, and since swings require lots of room on either side of them to reduce impact injuries, they're widely seen as space hogs. Thus, according to the National Program for Playground Safety, only 57 percent of school playgrounds had swing sets in 2004. Seventy-nine percent of public parks had them, down from 95 percent four years earlier. In response to student demand, though, Westdale Heights will join the minority of schoolyards that have swings when the next phase of playground construction gets underway.

Slides are a different story: 94 percent of playgrounds had them in 2004. However, heights have come down in recent years in an effort to prevent falls, so the "newest thing" among manufacturers is devising ways to make slides faster, Meihaus says. One way is to tilt the bed way at a steep 45 degrees, ending in a long run-out to slow the dismount.

It goes without saying that kids' suggestions aren't always practical. Westdale Heights' mascot is a wizard, so many students asked for a castle theme, which planners considered. However, the kids also wanted a moat. Drowning risks aside, "in Louisiana we have too many mosquitoes for that sort of thing," Frank says with a laugh.

Exercising the imagination

While Meihaus realizes that vigorous play has its place on the playground, he worries that the current emphasis on active physical play is edging out imaginative and creative play and is perhaps contributing to the high rate of playground injuries.

Joe Frost, who co-authored Developmental Benefits of Playgrounds, expressed similar concerns three years ago when he told the Associated Press:

"What is lacking on most American playgrounds are the materials, the spaces and the equipment for other forms of play—make-believe, organized games, creative play with things like sand and water, nature areas and gardens, and building materials, and people around who know how to involve children in those things."

Child-development experts agree that in addition to physical activities like running, jumping, climbing and swinging, playgrounds should promote fantasy and dramatic play, as research suggests that the latter types of play have salubrious effects on children's cognitive development, peer relationships and emotional well-being. Additionally, Frost's research suggests that children engage longer, suffer fewer injuries and exhibit fewer behavior problems on playgrounds that promote the various kinds of play, not just physical activity.

Playgrounds, then, ideally should combine intimate spaces—such as cubbies, foxholes and tunnels—with social and wide-open spaces, many experts contend. While wide-open spaces promote physical games such as tag, private and protected spaces promote imaginative play, enabling solitary or small groups of kids to transport themselves anywhere from a store to a submarine.

Though published in 1974, the book Build Your Own Playground by Jeremy Joan Hughes makes a point that is still relevant today:

"Play demands the segregation of a small group of kids because they are creating a world of make-believe," Hughes writes. "And if too many people get involved… it suddenly stops working. I can convince four kids that I'm the archbishop, but 40 kids I can't."

Meihaus, who designed and built custom playground equipment for 23 years before founding

Playground Consulting and Design, says one way to encourage imaginative play is to put more thought into the play structure itself, not just the equipment or events hanging off of it.

"I used to judge [my designs]," he says, "by mentally stripping all of the slides and everything off and asking, 'Is there any reason why kids would want to go on the structure itself, or is all the play value confined to the equipment hanging off it?'"

Multiple levels, creative ins and outs, and imaginative interiors are all ways of adding play value to the structure itself. Meihaus wishes manufacturers would put more thought into the undersides of structures as opposed to what's up in the air.

"That's a whole new environment that gets overlooked," he says, and it's ideal for enticing kids into role-playing.

However, with some safety advocates pushing for total-visibility safety standards, which would require clear, unobstructed sight lines to every point on the playground, Meihaus worries that kid-sized crannies will be eliminated. Ahern already has noticed a trend toward unimpeded sight lines.

Say goodbye to sameness

Community-built playgrounds, which can cost half as much as manufactured, professionally installed playgrounds, are gaining in popularity among cash-strapped schools and communities. The risk-management issues arising from community-built projects can't be ignored, though.

Ahern says many playground equipment manufacturers have "road maps to walk people through a community-built installation," but if they aren't followed to the letter, the manufacturer is off the hook, and the community assumes liability.

In fact, whenever other parties besides big manufacturers get involved with playground design, liability issues pop up, so unique custom-designed play spaces have lost ground to playgrounds furnished with prefabricated equipment from catalogs.

As a result, modular, pipe-and-platform play structures have become ubiquitous, Meihaus says.

"People are getting really tired of cookie-cutter playgrounds," he says.

A lot of modular playground equipment centers on the concept of flow-through.

"Where the kid climbs up, runs across a series of decks and slides down the other side, then runs around and does it again," Meihaus says. "It takes about 22 seconds."

That's fine for playgrounds at fast-food restaurants that don't want to encourage lingering, or perhaps for schools with short recesses. But for playgrounds where kids and parents are expected to hang out, flow-through designs quickly become dull, he contends.

One way to counteract the unrelenting sameness in playgrounds is to start with a site-specific as opposed to an equipment-centric design approach, Meihaus says.

For example, the proposed site of the Morton Arboretum's Children's Garden was expanded to include a stand of existing trees, which became an integral part of the playground design. The arboretum hired a German firm to build custom wooden playground equipment—which blends in with the natural environment—in and around the towering trees. Based on landscape architect Herb Schaal's designs, the soaring structures allow kids and adults alike to get close-up views of the canopy.

In a site-specific design, elevation changes, hills and depressions with proper drainage might be retained rather than leveled so kids can incorporate them in active and imaginative play.

"It comes down to the box," Meihaus says. "When kids get a package, what do they always end up playing with? The box. We should apply that lesson to playground design. We need to start paying more attention to the box and not just the toy inside."

What's Hot

FREESTANDING STRUCTURES Instead of being dominated by one monolithic, modular piece of play equipment, previous generations' playgrounds were made up of several freestanding elements, and industry insiders have noticed a resurgence of this type of design. And because freestanding play structures are relatively inexpensive, they're easily added to existing playgrounds to freshen and reinvigorate the space.

NEW TWISTS ON RETRO Geometric climbers and merry-go-rounds are back but with extreme makeovers. In the former category, metal bars have been replaced by high-tension cables, which transmit movement through the system for added excitement. In the latter category, one of the more creative offerings combines the thrill of a merry-go-round with the challenge of a spatial net. Kids climb on the inside of an 8-foot-tall "hot-air-balloon basket" made of cable webbing as peers spin them around. Special bearings keep rotational speed under control, though there's nothing to prevent riders from climbing outside of the basket.

SPATIAL NETS Long popular in Europe and Asia, these high-tension climbing systems have caught on in the United States. Available shapes include towers, pyramids, domes, tetrahedrons, spiders and spaceships.

REALISTIC ROCK FORMATIONS Unlike climbing walls with boldly colored grips, which also are immensely popular, faux boulders are designed to look like the real thing, with outcroppings, crannies and fissures serving as handholds and footholds. Natural-looking play structures in general are gaining favor over boldly colored components that don't complement their natural or architectural surroundings.

SPINNERS OF EVERY SORT From one-seat spinners to newfangled merry-go-rounds that can hold up to 25 kids, manufacturers are twirling out ways to satisfy kids' inexplicable desire to get dizzy.

ELECTRONIC COMPONENTS The immense popularity of video games, computers and other interactive media has some manufacturers scrambling to find ways to introduce electronic play components to the outdoors. One such device records voices and plays them back in a distorted manner. Another answers kids' questions audibly, though in the vague manner of a Magic 8 ball. Time will tell if these newly developed components can resist foul weather and rough play.

Back to nature

To varying degrees, thinking about "the box" means bringing natural elements into playground design. Color is an easy starting point.

"One of the biggest trends we've seen is moving away from primary colors to a natural or neutral look to get playgrounds to blend in with the nature surrounding them; that's been going on for about two years now, but it seems to be picking up steam," says Ahern, adding that folks in woodsy suburbs "don't want things that stick out."

But color schemes are just the beginning. Most child-development experts and equipment manufacturers can agree that sensory stimuli and contact with nature are important parts of the play experience, however, incorporating these desirable aspects into playground design can be challenging.

"Even if it's as simple as putting in a little gazebo where kids can sit and play with acorns and sticks, it's critical to the learning process to have that interaction with nature," Ahern says. "There's only so many things metal and plastic can do."

Parks and recreation departments are therefore looking at landscaping as a peripheral or, in some cases, integral playground component.

Dalton says the Naperville Park District includes landscaping not just for kids but also for the enjoyment of adults who are supervising them, adding that natural elements provide an opportunity for grownups to teach children about the environment.

With those and other benefits in mind, some manufacturers profess a commitment to include "survivable natural elements" in play environments, as one equipment supplier put it.

"Our commitment stems from a growing concern that children are shut off from the world of nature due to our country's increasing urbanization and computerization," according to that supplier's Web site. "Plants and natural settings add life to sterile playgrounds, and expose children to natural science principles. Good playgrounds find a balance between the built (man-made) and the natural environment."

Epitomizing that balance is Tiger Paw Park Playground in Hillman, Mich., which along with accessible manufactured equipment boasts shade trees and gardens. But moving beyond landscaping, the site also features two sand-and-water tables and two accessible diggers (sort of like hand-operated backhoes) to get kids in touch with nature. A large amphitheater near the sand-play area provides an irresistible spot for rolling downhill. Two strategically planted rows of junipers create a secret pathway.

At the Morton Arboretum's Children's Garden, nature plays the starring role and engages all five senses. A rainbow of flowers pleases the peepers; birdsong, rustling leaves and trickling water provide a natural soundtrack; fragrant plants like roses and catnip tickle the nostrils; and lamb's ear, snapdragons and other tactile-engaging plants just beg to be manipulated. The garden also has crab apples, herbs and other edibles, although children aren't encouraged to eat the vegetation. Adjacent to the Children's Garden is an evergreen hedge maze with a half-mile of twists and turns, seven outdoor rooms showcasing seasonal plants, and a 12-foot lookout platform built around a 60-foot sycamore tree. On a recent spring day, several parents clearly relied on gleefully obliging kids to do the navigating.

Tipping the balance almost fully in nature's favor are natural playscapes, which blend natural materials and indigenous vegetation with preexisting landforms and environmentally inspired structures, such as tree-stump climbs and wooden climbing walls with branch handholds. Other play features may include sculpted earth, boulders, rock gardens, dirt and sand pits, low tree houses, gazebos, and water features, says architect Ron King, president of the Natural Playgrounds Co. in Concord, N.H. Bridges that children can cross as well as play beneath are common in his designs, which make use of existing features such as streams, shady groves and hills that, when snow-covered, are ideal for sledding. Another common feature—and bona fide kid pleaser—in King's designs are plastic slides built right into hillsides. Because in-ground slides have no height from which to fall, if space permits, extremely long ones can be made.

One elementary school slide of King's doing travels a full 35 feet. Boulder tiers built into the same hillside provide great places to climb, sit or talk with friends. In addition, a fitness course winds through the property's field and woods, along with a trail system that passes many natural and human-made features inventoried and mapped by the students.

"A quiet picnic spot in the pine forest was cleared by the students, and its log benches are now one of their favorite hangout spots," King says. Fourth graders constructed the entire natural play area with help from parents and under the supervision of Natural Playgrounds Co.

New kids on the block

Another new phenomenon in playground design is the focus on babies between 6 and 23 months of age.

"Until recently, manufacturers and designers never acknowledged that age group's existence,"

Meihaus says.

Typically, playground design is aimed at one of two age groups: 2- to 5-year-olds or 5- to 12-year-olds. But with studies suggesting that play activity during infancy is much more important for the development of gross motor skills than previously thought, playground designers have begun to create outdoor play spaces with infants and crawlers in mind. Though still an emerging trend, the practice is common enough that AS™ recently came out with new guidelines specific to that age group.

Infant playgrounds should be separate from older kids' playgrounds not only for safety reasons but also because 6- to 23-month-olds have unique needs, experts say. Above and beyond infant swings, babies require space to move about freely under the watchful eye of guardians. They need soft surfaces to crawl, roll and lie on, as well as things to grip, grasp and pull up on. They need rounded edges for safety's sake.

The infant playgrounds that Meihaus has seen generally feature some type of poured-in-place surface, perhaps with slight elevation changes or steps for crawlers to master. Short tunnels and activity panels with mirrors, sliding beads and other visual, tactile and aural stimuli can be incorporated into obstacle course- or maze-like configurations to satisfy babies' need to explore while allowing for maximum supervision by guardians.

"The idea is to create space where a person with an infant can put the baby down and let them crawl around," Meihaus says, which can't safely be done on an older kids' playground or in proximity to wood chips and other choking hazards.

Adjacent to its full-size evergreen maze, the Morton Arboretum has a special maze with a resilient poured-in-place path and sticker-free plantings that are just shin-high to an adult but a fun challenge to toddlers on all fours or early walkers.

In addition to addressing the needs of babies, playground planners and manufacturers have begun to think of the 5- to 12-year-old segment as two distinct groups because what thrills 5-year-olds will likely bore finicky preteens.

"Kids 8 and older have a tendency to move away from playground equipment, so manufacturers face a real challenge in getting them active again at recess," Ahern says. Circuit play systems address older kids' need to compete and don't bear the perceived stigma of being "babyish," he adds.

Although Ellis School in Fremont, N.H., had a playground, it was geared to younger kids, and Principal Kelli Killen grew concerned that the older students were standing around rather than exercising during their break. After Ellis adopted a wellness policy requiring students to keep active during breaks, most of the seventh and eighth graders walked around the school's playing field in circles. A new playground was planned to give them more options, and a student advisory group was formed to find out what type of equipment would appeal to older kids. The results were so successful that a rotating schedule was devised so every child would get a turn on the equipment. Some teachers even offer extra playground time as an incentive for good behavior.

The playground's centerpiece is an 18-foot-tall spatial net shaped something like a pyramid.

A 9-foot-tall climbing rock ranks a close second in popularity, suggesting that older kids are enthusiastic climbers.

Indeed, when Dalton of the Naperville Park District asks older kids what playground features please them, climbing elements are often tops.

"They tell me climbing walls, and that thick cargo netting that's almost like a cobweb formation to climb on," he reports.

And at the Morton Arboretum Children's Garden, age is a determining factor in equipment popularity, with older kids gravitating to the net crawl and younger kids mobbing the playhouses and sand features.

Fun for all

In addition to the previously discussed existing and emerging trends—taller and more physically challenging equipment, increasing interest in site-specific and community-built playgrounds, inviting nature into play areas, and catering to crawlers and preteens—several other playground issues are commanding attention of late. Foremost among these is universal accessibility, Meihaus says. Organizations like Boundless Playgrounds and Shane's Dream are ushering in an era where children with disabilities reasonably can expect to play side-by-side with able-bodied peers in an integrated environment (as opposed to many unimaginatively ADA-compliant playgrounds with ramps and little else for mobility-challenged kids).

Universally accessible playgrounds might include such elements as sandboxes raised to table-height so children in wheelchairs can dig and build, ramps leading all the way to the highest decks on play structures, swings with high backs and armrests, and play equipment configured in such a way that all children can play at their highest level of ability without feeling set apart from the action.

Meihaus says the playground industry still has a long way to go in regards to accessibility, pointing out that just because a playground is ADA-compliant doesn't necessarily mean that disabled children will find it exciting. He feels that accessibility is another area where more emphasis on creative and imaginative play—or different types of active play—might do a world of good.

"Right now there's so much emphasis on getting disabled kids onto the play structure, but if they get up there, and there's nothing they can do, where's the fun in that?" he asks. "But a child in a wheelchair can still play tag and hide-and-seek," he says, making a case for less equipment-centric playgrounds.

Ahern says that the social interaction that occurs when disabled kids have full access to play structures, if not all the equipment hanging off them, leads to its own kind of fun. With opportunities for social interaction in place, kids will find ways to make merry.

"Even if it's rolling pebbles down the slide," he says.

Building mental muscle

Recognizing that play is not just a way of blowing off steam but also a means of learning, planners of school and community playgrounds often incorporate educational components into their designs or go all out and build what is known as a learning playground. Educational aspects can be as subtle as cementing faux fossils into the bottom of the sandbox so children can make-believe they are architects unearthing dinosaur remains.

Based on input from students, parents and teachers, the community-built playground at Westdale Heights Academic Magnet School in Baton Rouge, La., bills itself as a learning playground that's intended to build brains as well as biceps. Side-by-side slides with differently textured surfaces are used by science teachers to demonstrate friction, and spinners impart a firsthand understanding of centrifugal force. The impending second phase of construction calls for a pavilion area with tables that will serve as an outdoor classroom by day and a community picnic area after hours. A gears panel and a pendulum also will be added.

Excepting instrumental panels that bring sound into the play space, Meihaus says he's not a huge fan of activity panels on playgrounds, from what he has witnessed.

"Children usually zoom right by them," he explains. "They're just plain old walls as far as they're concerned."

Indeed, research suggests that activity panels aren't commonly used independently by children, but that they do encourage interactions between adults and kids on playgrounds.

Meihaus cautions that no matter how durably constructed, panels and other components with lots of moving parts tend not to withstand rigorous playground conditions.

"With kids, if there's a wheel, they're going to find out if it will go backwards, and if so, how fast," he

says. "And if something is designed to hold sand, kids will find out if it will hold a big rock. They don't necessarily set out to break things, but that's usually the end result."

Once, when a prospective client came to him with designs for an elaborate sand-play structure with wheels, pulleys and other moving parts, Meihaus refused to build it on the grounds that the client would suffer buyer's remorse when the equipment failed. Undeterred, the client had the contraption built by someone else.

"And within six months, there wasn't a darn thing on it that still worked," Meihaus says.

However, six months after the grand opening of the Children's Garden at the Morton Arboretum, all the metal flowers with the noisemakers at their centers are still in working order, though the xylophone has started to rust thanks to the Midwestern weather.

Stiff competition

If conventional playgrounds don't seem quite as cool to kids as they used to be, that's because they're up against some stiff competition. Splash play areas have proliferated, and kids love them. Parks departments like them, too, because full automation and no standing water mean there's often no need to staff the site with attendants or lifeguards. The Houston Parks and Recreation Department in Texas oversees 11 splash play areas featuring misters, sprayers, oscillating sprinklers and in-ground geysers.

Due to the proven popularity of water features, planners have begun to incorporate them in conventional playground designs. Some are naturalistic, such as the Secret Stream in the Morton Arboretum's Children Museum, where kids can race cork boats downstream. Others do double-duty as play apparatus and art, such as the cement fish that spews water to the delight of dripping-wet toddlers at Washington Park Playground in Springfield, Ill. And then there are stationary water guns and cannons that allow kids to engage in aqua combat.

When adding water features to playgrounds, planners must use caution in regards to placement. Water features should not be adjacent to any type of apparatus that involves gripping and climbing, since kids' hands and shoes will get wet, Meihaus says.

Unfortunately, for some kids, playgrounds of any type pale in comparison to sedentary indoor pastimes like playing videogames and fiddling with electronics, so playground designers are starting to bring interactivity and electronic components into the outdoors. Tiger Paw Park Playground in Hillman, Mich., features a device that records children's voices and plays them back in a distorted fashion, with a few extra sound effects thrown in for fun.

Finally, there's the Six Flags factor.

"Sometimes I think we expect too much from playgrounds," Meihaus says. "Kids complain that they're boring. Well, yeah, that's because you just came from Six Flags. A 6-foot slide is going to feel boring."

Rather than trying to compete with amusement parks, Meihaus says playground designers might win children back by creating play spaces that rev up the imagination as opposed to just raising adrenaline.

"Play is not as complicated as we try to make it," he says.

Ahern concurs: "The playground designers and the parks managers and the parents all think kids need some fancy type of equipment to make them happy, but all you really need is to put them in a place that encourages interaction, and together kids will find the fun."

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