

“ Play is our brain’s favorite way of learning.”

DIANE ACKERMAN, AUTHOR

## Add **PLAY RICHNESS** to Your Playground

One of the best places for children to play is on a playground that is rich in play value. In fact, play richness is the key factor in designing exciting, fun and developmentally appropriate playgrounds. Great play spaces are those where children of all ages and abilities can grow and learn through physical, sensory and social experiences. Those experiences are further divided into specialized play types such as spinning, tactile or cooperative play.

Each of those types of play has a card in this deck. Each card lists the reasons that make this activity important to child development, as well as some of the Playworld products that support this activity.

Use these cards to mix and match products to create your new playground.

These cards were inspired by—and may be used in conjunction with—our Inclusive Play Design Guide.

# GLOSSARY

The following glossary of terms will aid in understanding some of the more complex developmental terms that may be found on some of the cards.

**MOTOR PLANNING** Motor planning or praxis is the ability of the brain to conceive, organize, and carry out a sequence of unfamiliar actions. In the playground this includes walking, climbing, running and/or any unfamiliar activities that do not have consistent, predictable steps to follow or outcomes.

**PROPRIOCEPTIVE SENSORY SYSTEM** The proprioceptive system consists of sensory information caused by contraction and stretching of muscles and by bending, straightening, pulling and compression of the joints between the bones. Because there are so many muscles and joints in the body, the proprioceptive system is always at work. Most proprioceptive input is processed in areas of the brain that do not produce conscious awareness. Without good automatic responses, such things as eye-hand coordination are very difficult.

**VESTIBULAR SYSTEM** The vestibular system is the sensory system that responds to the position of the head in relation to gravity and accelerated or decelerated movement. There are two types of vestibular receptors in the inner ear in a structure called the labyrinth. One type of receptor responds to the force of gravity. The other type of receptor is in the semicircular canals in the ear. These canals are responsible for our sense of movement. The vestibular system is a unifying system. All other types of sensation are processed in reference to this basic vestibular information.

### Why is this activity important in child development for all children?

- When children spin, multiple parts of the brain are stimulated simultaneously.
- This builds new and more developed pathways throughout the brain.
- These pathways improve learning potential, spatial awareness and rhythm.
- Spinning activities may develop pre-reading skills and concepts.
- Helps with improving balance, muscle control and gross motor skills.

### Playworld products that support this activity:

- Accessible Whirl
- Bing Boing
- Cozy Cocoon™
- Loopy Whoop
- Overdrive
- Revo
- Spinami
- Spin Cup
- Spintastic
- Tire Swing
- Twister
- Unity® SpinR
- Vortex
- Whirligig

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Stimulates a child's vestibular and visual sensory systems.
- Allows a child to work on balance.
- The sensory input helps develop a child's ability to motor plan. This is the ability for a child to think through unfamiliar movements of their body.
- Offers the experience of a modified fall through space and the thrill of perceived risk.

### Playworld products that support this activity:

- Aluminum Slides (Cochlear implants)
- Bambino™
- Glide Slides
- Hill Slide (make accessible without ramp)
- Nuvo™ 360° Spiral Slide
- PlayCubes™ 8.OSL
- Play Dozer
- PlayExpress Engine
- PlayTown Playground
- Prairie Wagon
- Rumble Seat Slide
- Slither Slides
- Stainless Steel Slides (Cochlear implants)
- Trippple Racer Glide Slide®
- Tube Slides
- Twist & Shout Slide
- Unity® Slide Climber
- Zig Zag Slide
- Zip Stix

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Stimulates the vestibular system.
- Helps regulate anxiety.
- Develops muscle tone.
- Establishes a sense of timing during movement.

### Playworld products that support this activity:

- AeroGlider™
- Bing Boing
- Duo Seesaws
- Flip Flop™
- Funky Animals
- Nucleo
- Quattro Seesaws
- Ripple Bridge
- Rope Bridge
- Sling Seat
- Spring Riders
- U-Bounce
- Unity® RockR
- Unity® Teeter Tunnel™
- Vaquero
- Wave Rider Seesaw

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Provides each child's nervous system with a wealth of visual, vestibular and proprioceptive information. Since their position changes constantly, their brains register continual updates from their sensory systems.
- As they swing, children gain an understanding of how their body moves through space and the speed of movements they are comfortable with.
- Swinging works on motor planning skills necessary to resist or increase active movement.
- Laying on a swing puts pressure on the muscles and joints, thus calming the nervous system.
- Provides calming movement.
- Helps develop postural stability.

### Playworld products that support this activity:

- Accessible Swing Seats
- Early Childhood T-Swing
- Swings with a belt seat (i.e. Arch Swings)
- Tire Swing
- Unity® Hoopla Swing

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Strength training is important for everyone, including children with motor control challenges such as cerebral palsy.
- Increases muscle strength and endurance, helps protect muscles and joints from injury, strengthens bones, helps promote healthy blood pressure and cholesterol levels, and boosts metabolism.
- The activity of swinging from one arm to another on overhead equipment is called brachiation. The benefits of brachiation include developing skills such as endurance, strength, flexibility, general coordination, hand-eye coordination, visual perception of distance, balanced locomotor patterns, and confidence.

### Playworld products that support this activity:

- Branch Out
- Chinning/Turning Bar
- EZ Digger
- infiNET™
- LiveWire Zip Line™
- Loop Ladders
- Overdrive
- Overhead Ladder with Parallel Bars
- Overhead Spiral Ladder
- PlayCubes™
- Round-About
- Sky Rail
- Sky Swivels
- Sliding Pole
- Twister
- Twist 'N Twirl
- Unity® Canopy
- Unity® Dome

Note: This is only a sample of the Playworld® equipment that enables this activity.

## Why is this activity important in child development for all children?

- Strength training is important for everyone, including children with motor control challenges such as cerebral palsy.
- Increases muscle strength and endurance, helps protect muscles and joints from injury, strengthens bones, helps promote healthy blood pressure and cholesterol levels, and boosts metabolism.
- Climbing helps create “sensory-motor intelligence” and “visual spatial perception,” allowing kids to effectively relate to objects and navigate in the world.
- Some of the requirements for climbing contribute to children’s cognitive development – memory, problem solving, and imagery/visualization.
- Perceptual-motor skills such as spatial, directional and body awareness are sharpened through climbing.
- Motor fitness skills such as agility, speed, power, balance, and coordination are also developed by climbing.

## Playworld products that support this activity:

- Bambino™ Beehive Arch
- Boulders, T-Rex
- Climbers
- Climbing Squares
- Flex Tread Climbers
- GEO Climbers (all)
- Home Dome
- Moon Rock Climber
- Nuvo™ Climbers
- PlayCubes™
- Pup Tent Climber
- RockBlocks®
- Summit Climbers
- Triumph™ Climber
- Unity® Dome
- Unity® Rushmore™

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Crawling engages virtually all of the muscles of the body, from the arches of the feet to the abdominal and neck muscles. Arm, chest and back muscles are utilized in pulling the arms forward and then pulling the body forward. Quads, hips and hamstrings are worked during the leg movement.
- Crawling sends simultaneous information to the brain from all of the tactile and proprioceptive receptors, the surface receptors, the deep receptors and the proprioceptive receptors in the joints. And not only is the brain receiving all of this input, it is receiving it through the simultaneous input from the movement of the right arm and left leg, and the left arm and right leg.
- The crawling movement is one of flexion and extension of the arms and legs, pushing and pulling using the flexor muscles, and then the extensor muscles which help develop muscle balance.

### Playworld products that support this activity:

- Adventure Tubes
- Climbing Squares
- FirstPlay® Toddler
- Flex Treads
- Home Dome
- Infant Fun Centers
- infiNET™
- Listo
- Moon Rock Climber
- Nature-Themed Log Tube
- PlayCubes™
- RockBlocks® Climbing Tunnel
- T-Rex
- Unity® Dome
- Unity® Rushmore™

Note: This is only a sample of the Playworld® equipment that enables this activity.

## Why is this activity important in child development for all children?

- Our “sense” of balance is actually based on the proper functioning of the vestibular system in close conjunction with our visual, motor skills and proprioceptive systems.
- Balance is considered to fall into the same category as flexibility, core strength, and mobility as an essential ambulatory skill.

## Playworld products that support this activity:

- Adventure Series – Various components
- Balance Beam
- Balance Trax
- Bambino™ Stepping Stones Arch
- Button Loop
- Button Track
- Canyon Crossing Bridge
- Challenge Walk
- Climbing Squares
- Critter Crossing
- DropZone Tower™
- Funky Animals
- Lily Pods
- Nucleo
- Parallel Bars
- PlayTown Fire Hose Climber
- PlayTown Nature Center
- Ripple Bridge
- Rock Log
- Sidewalk
- Spintastic
- Spring Mates®
- Stationary & Bounce Buttons
- Timber Trail Bridge
- U-Bounce
- Unity® Steppers
- Unity® Teeter Tunnel™

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- For children unable to register where their body is in space, jumping provides a sensory jolt to the joints which then send information to the brain helping them identify where or how their body is positioned.
- A child with Sensory Processing Disorder (SPD) may need a stronger signal, and need to jump higher or harder to create that.
- Provides convincing contact that enables the child to know where their body stops and the ground starts.

### Playworld products that support this activity:

- Adventure Series-  
The Stump Jump
- Bounce Button
- Bouncing Drawbridge
- Climbing Squares
- Flip Flop™
- Freddie Fire Truck
- Nucleo
- PlayCubes™
- Ripple Bridge
- Seesaws
- Timber Trail Bridge
- U-Bounce
- Unity® Rushmore™
- Unity® Steppers
- Walk the Plank

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Improves self-esteem, increases ability to manage stress, creates healthy body composition, builds flexibility, strength, endurance, and stabilization of blood sugar, lowers cholesterol, and improves blood pressure values.
- Running, walking and rolling games provide more opportunities for social interaction.
- Provides opportunities to practice and master skills that are vital for independent movement.
- Helps burn calories and helps reduce the risk of obesity in children.

### Playworld products that support this activity:

- Bridges
- Flex Tread Climbers
- infiNET™
- NEOS®
- Ramps
- Tetherball
- Triple Shoot Out
- Unity® Dome
- Unity® Teeter Tunnel™

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

All of the benefits of motion should not be restricted to typically-developing families. Providing a motion experience for people who use a wheelchair and cannot transfer offers them the same benefits.

Those include:

- Stimulates the vestibular system.
- Helps regulate anxiety
- Develops muscle tone.
- Provides each child's nervous system with a wealth of visual, vestibular and proprioceptive information. Since their position changes constantly, continual updates are required from their sensory systems.
- Opportunities for children of all abilities to play together.

### Playworld products that support this activity:

- Accessible Whirl
- AeroGlider™

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- “Tactile” refers to the sense of touch. Skin is the tactile system’s sensory receptor.
- The tactile system enables us to identify where we have been touched.
- The tactile system is the largest sensory system in the body and plays a vital role in human behavior and physical movement.
- Tactile discrimination tells whether objects are cold, wet, sharp, or scratchy.
- Touch sensations flow throughout the entire nervous system and influence every neural process to some extent.
- Tactile input helps the brain organize information for developing visual and auditory systems.

### Playworld products that support this activity:

- Accessible Climber
- Bambino™ Panels
- Boulders, Diggables, T-Rex
- Cozy Cocoon™
- infiNET™
- KPE: Kid Powered Energy Family
- Listo & Net Climber
- Moon Rock Climber
- NEOS®
- PlayTown
- RockBlocks®
- Roller Slither Slide
- Rope Ascension
- Rumble Seat Slide
- Sand & Water Play
- Slither Slide Arch
- Twist & Shout Slide
- Wildwood Climber
- Zig Zag Slide

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- All children enjoy music and other noises at some level.
- They especially enjoy sounds that they control.
- Children with sensory processing disorder often like deep tones, rather than high tones.
- The appropriate noise level for one child might be very different for another child.

### Playworld products that support this activity:

- Babble-On
- Ball Maze Panel
- Bambino™ Panels
- Bell Panel
- Chimes Panel
- Concerto™ Cabasa
- Concerto™ Chimes
- Concerto™ Congas
- Concerto™ Vibes
- Drum Cannon Panel
- Drum Set
- Funky Animals with Sounds
- Gears Panel
- Horn Panel
- KPE: Kid Powered Energy Family
- NEOS®
- PlayTown Music Store
- Rhythm Wall
- Shifting Sands Panel
- Spring Riders with Sounds
- Unity® Dome Sensory Connections

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Visual processing refers to a group of skills used for interpreting and understanding visual information.
- The brain-eye connection is an integral component of the visual system, since the image that the retina (back of the eye) receives needs processing before it can be used. For example: the image is upside down on the retina.
- Visual processing helps you move your eyes in a specific direction with or without distraction, allowing motion tracking.
- Use of the visual sensory system strengthens the eye muscles, the ability to focus on something, and the ability to see differences between objects that are similar.

### Playworld products that support this activity:

- Bambino™ Jumble, Move It & Rainbow Panels
- Find the Way Home Panel
- Hunt Panels (i.e. Nature Hunt Panel)
- infiNET™ Sensory Cues
- Magnifying Panel
- NEOS®

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- In a study of 96 children diagnosed with attention deficit hyperactivity disorder, the greener the play area, the better the concentration and mental functioning.
- Green environments reduce stress, depression and anxiety. A 2005 study in Sweden found that the more often one visits green areas, the less often one reports stress-related sickness.
- Green environments improve the functioning of the body's immune system.

### Playworld products that support this activity:

- EZ Digger
- Hill Slide
- PlayTown Nature Station
- Sand & Water Table
- Sandbox
- Sand Studio 7
- Window Planter Panel

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- A quiet place offers a child a place to escape the stimulation of a busy playground and take time by themselves.
- Cozy places provide space for children who may be on the Autism Spectrum to regulate their sensory systems after a time of high sensory input.

### Playworld products that support this activity:

- Adventure Tubes
- Anywhere Seat
- Bambino™ Beehive Arch
- Cozy Cocoon™
- Moon Rock Climber
- PlayExpress® Tanker Car
- Play Seat
- PlayTown School
- Pup Tent Climber
- Ridge Boulder
- RockBlocks®
- RockBlocks® Climbing Tunnel
- Sling Seat
- T-Rex Hatched Egg
- Unity® Rushmore™
- Wildwood Climber

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- In cooperative play, children share a common activity and work toward a goal together.
- While a basketball net may promote inclusion, it doesn't necessarily promote cooperative play. On the other hand, a see-saw requires cooperation. It takes at least 2 people to make it move.
- Children with autism, sensory processing disorders, as well as other intellectual or neurological disabilities need a lot of practice in order to be able to accomplish cooperative play.

### Playworld products that support this activity:

- Accessible Whirl
- AeroGlider™
- Babble-On
- Bing Boing
- Cruise Line™
- Flip Flop™
- NEOS®
- Overdrive
- Revo
- Seesaws (including Quattro)
- Spinami
- Tetherball
- Unity® Hoopla Swing
- Unity® SpinR
- Unity® Teeter Tunnel™
- Vaquero
- Whirligig

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Social skills are the foundation for getting along with others. Think of social interaction as having three basic elements:
  1. Social intake - noticing and understanding other people's speech, vocal inflection, body language, eye contact, and even cultural behaviors.
  2. Internal process - interpreting what others communicate to you as well as recognizing and managing your own emotions and reactions.
  3. Social output - how a person communicates with and reacts to others, through speech, gestures, and body language.
- A lack of social skills can lead to behavioral difficulties in school, delinquency, inattentiveness, peer rejection, emotional difficulties, bullying, difficulty in making friends, aggressiveness, problems in interpersonal relationships, poor self-concept, academic failures, concentration difficulties, isolation from peers, and depression.
- Children with learning disabilities, sensory integration difficulties, Asperger's Disorder, Autism Spectrum Disorder, neurological disorders, and emotional disabilities often need additional practice to learn social skills. A playground is a perfect place to practice what they are learning in social skills training.

### Playworld products that support this activity:

- Branch Out®
- Double and Triple Slides
- infiNET™
- Moon Rock Climber
- NEOS®
- PlayCubes™
- PlayForm 7®
- PlayTown playgrounds
- PlayWeb® Climbers
- Sand & Water Table
- Sidewinder Cycle with Side Car Spring Rider
- Speedy Racetrack Spring Rider
- Unity® Dome
- Unity® Rushmore™
- Unity® Slide Climber
- Unity® Teeter Tunnel™
- Vaquero

Note: This is only a sample of the Playworld® equipment that enables this activity.

### Why is this activity important in child development for all children?

- Dramatic and imaginative play is extremely important for child development. Children who are given a variety of opportunities to develop their creativity and imagination are learning to express their individuality in interests, abilities and knowledge. In these interactions they also learn to appreciate and respect differences in cultures and viewpoints.
- Dramatic play assists children in expanding their awareness of self in relation to others and their social environment, learn language, cognitive, and social skills.
- Some children with disabilities have more difficulty than others with pretend play, which is why they need to be offered many different opportunities.

### Playworld products that support this activity:

- Boulders, Diggables & T-Rex
- Driver Half Panel
- Freddy Fire Truck
- Funky Animals
- Home Dome
- infiNET™
- KPE: Kid Powered Energy Family
- Playdozer
- PlayExpress®
- PlayTown
- Prairie Wagon
- RockBlocks®
- Unity® Rushmore™
- Spring Mates®
- Steering Wheel
- Storefront Panel
- Telescope
- Themed products (Castle, Nautical, Nature)
- Trike Path Signs
- Unity® Steppers
- Vine Climber
- Walk the Plank
- Wildwood Climber

Note: This is only a sample of the Playworld® equipment that enables this activity.