

Sensory integration is the neurological process that organizes sensation from one’s own body and the environment and makes it possible to use the body effectively within the environment. Sensory processing is the brain receiving, interpreting, and organizing input from all of the active senses at any given moment. Sensory Processing Disorder (SPD) SPD is a condition that exists when sensory signals don’t get organized into appropriate responses. A person with SPD finds it difficult to process information received through the senses, which makes performing everyday tasks challenging. Because of motor clumsiness, social anxiety, auditory and visual disturbances, and balance and performance problems, SPD can make simple “play” difficult.

Sensory Systems: These are part of the nervous system responsible for processing sensory information. A sensory system consists of sensory receptors, neural pathways, and parts of the brain involved in sensory perception



TACTILE

Touch is a perception resulting from activation of neural receptors, and a variety of pressure receptors respond to variations in pressure. The system works when activity in a sensory receptor is triggered by a specific stimulus; this signal eventually passes to an area in the brain uniquely attributed to that area on the body and this allows the processed stimulus to be felt at the correct location.

Equipment that enables children to engage the tactile system:

- Garden Sensory Wall
- Climbing Squares Block Climber
- The Wildwood Climber
- Window Planter Panel
- Train



PROPRIOCEPTIVE

Proprioception is the sense of the relative position of neighboring parts of the body and strength of effort being employed in movement. This sense is very important as it lets us know exactly where our body parts are, how we are positioned in space and to plan our movements. Examples of our proprioception in practice include being able to clap our hands together with our eyes closed, write with a pencil and apply with correct pressure, and navigate through a narrow space.

Equipment that enables children to engage the proprioceptive system:

- Unity Stepper
- Geo Climber
- The Wildwood Climber
- Climbing Squares Block Climber
- Rock Climber
- Solar Climber
- Silo Climber
- Twist-n-Twirl
- Train
- Double Decker Cone Spinner
- Overhead Ladder
- Step Around
- Stationary Buttons
- Balance Trax
- Anywhere Sea
- Play Seat

References:

- Playworld’s Inclusive Play Design Guide
- 7 Senses Foundation
- Play and Playground Encyclopedia



VESTIBULAR

Explains the perception of our body in relation to gravity, movement and balance. The vestibular system is a unifying system.

Equipment that enables children to engage the vestibular system:

- Belt Seat
- Accessible Swing Seat
- Toddler Seat
- Slither Slide
- Nuvo Double Slide
- Spin Cup
- Double Decker Cone Spinner



AUDITORY

Hearing is the ability to perceive sound by detecting vibrations, changes in the pressure of the surrounding medium through time, through an organ such as the ear. Auditory processing relies on how the brain interprets, recognizes and differentiates sound stimuli.

- Concerto Instruments



VISUAL

Sight or vision is the capability of the eyes to focus and detect images of visible light and generate electrical nerve impulses for varying colors, hues, and brightness. Visual perception is how the brain processes these impulses recognizing, differentiating and interpreting visual stimuli through comparison with experiences made earlier in life.

Equipment that enables children to engage the visual system:

- Treasure Tumble Panel
- Hypnotize Panel
- Funhouse Panel
- Very Buried Panel