

Practice Ideas

Sensory Motor Development in the Outdoors



In the first years of life children are at the stage of sensory motor development which simply means their senses are maturing and their motor skills are developing. The outdoors offers an amazing range of sensorial and movement opportunities that can support their growing capabilities, curiosity and developmental needs.



Children are excited, engaged and educated by the stuff of the earth: plants, trees, water, stones, sticks, and soil. Interaction with and manipulation of these free materials have been building children's bodies and brains for millennia. To them of course it is all about play and the joy of movement. For us adults it is about providing these experiences in environments that support their development in a child centered way. Their relationships with people and place develop as they explore their world and the way it works. We adults have the privilege of sharing in their experiences and the responsibility of keeping them safe while they learn how to do this for themselves.



Our five external senses of sight, hearing, smell, taste and touch are commonly known. However, two of our most important internal sensory systems core to everyday functioning are less well known, the vestibular sense and the proprioceptive sense. Movement and sensorial experiences in our first few years of life are vitally important for the development and maturation of these two internal sensory systems.



The Vestibular System

This sense relates to balance and coordination. The work of the vestibular system is to keep our bodies upright against gravity. It enables us to stand and move effectively. Successful movement requires secure balance, as any toddler learning to walk will demonstrate. Watching a baby letting go of a supportive hand as they try to negotiate their first steps we see the immature vestibular system in action. As we make encouraging sounds we see the tentative let go, the swaying body, the balancing outstretched arms, and the inevitable plonk back down until with much practice the vestibular system matures enough to keep the toddler upright and toddling. Vestibular receptors are located in our inner ear (3 semi circular canals). They provide the sensory processing system with information about the orientation of our head and body. The rotating, rolling, swinging motions enjoyed by most children are the type of movements which help mature their vestibular systems. The outdoors offers lots of opportunities for this type of play. The vestibular system works in tandem with the proprioceptive system, which constantly aligns every part of the body to aid effective movement.





The Proprioceptive System

Proprioception is our body's sense of self in space. It too matures through movement and sensory experiences. Receptor cells all over the skin and in the muscles and joints feed the sensory processing system with information about the body position and movement. Proprioception refers to the way joints, muscles, send messages to the brain to help coordinate movement. Information is instantaneously fed back to the muscles and tendons that enable them extend or contract to move as required.



The maturation process also enables the developing child learn how much force or pressure to use in any given moment. For example if they are picking up a feather they use a different force than picking up a log, To tiptoe they must use different force than when they stomp. Our external five senses constantly feed into our proprioceptive system so we know where our body is and what it is experiencing and our sensory processing system instantaneously processes how our body needs to respond.

As this baby lies on the grass she feels or "senses" her body pressed into the grass, the weight of her head being held up, the texture of the grass she is touching, the warmth/cold of the air, and the sounds and smells that surround her. All of this sensory information is being processed as her vestibular and proprioceptive systems enable her keep this posture. She has mastered pointing and uses it to communicate her intrigue at the object she does not yet recognise - a dandelion stem. The development of the baby's brain is influenced by many factors including

relationships, experiences, and environment. Spending time outdoors with young children can be both enjoyable and insightful.

Pushing, Pulling, Lifting, Throwing, Filling and Emptying.

Young children become engrossed in repeatedly putting things, including themselves, in and out of containers and spaces. This is the work of the toddler and for very good reason, it is one way that they make sense of space, develop spatial awareness and learn how to balance and move. The more they learn to manage their own body and gain greater control of the materials they encounter the more complex their play becomes. This supports greater cognition and problem solving skills. It now becomes very apparent why children need to be given ample time for lots of movement in engaging well resourced spaces. It is fascinating to follow children around such spaces watching what grabs their attention and seeing the space from their perspective.

Building Competence and Confidence

Experiencing different surfaces, gradients, heights and speeds offers children opportunities to develop greater balance and coordination. It also builds self-esteem as they become confident in their own abilities. Appropriate adult support that offers children opportunity to build skills and face challenges while simultaneously protecting them from serious harm leads children on a journey to becoming risk aware. Managing the minor scrapes and bumps of childhood teaches resilience both emotionally and physically. Children who develop risk awareness and self-management skills are better equipped to keep themselves safe. These are skills that will serve them throughout life.





Movement

Outdoors, an infinite number of sensorial experiences await the curious child. The weather, with all its variations of wind, sun, rain or snow ensures many different sensations. The sights, sounds, smells, tastes and tactile sensations of the outdoor world offer a treasure trove of sensorial stimulation and movement opportunities.

Following the pottering pace of a toddler outdoors, watching closely what they do and see often shows you the world anew. As they explore with wonder, awe and curiosity their world unfolds, igniting their senses and building their bodies and brains. Each new experience connects neurons and synapses in the brain and each repetition strengthens these new neural pathways. Ample physical movement helps build strong bodies, increase stamina, and generate a sense of well being and competence.

Outdoors provides children with natural light and lots of visual tracking and distance focussing opportunities which support vision development. Tracking and focussing are required when reading and writing. Strong hand, arm and neck muscles assist in handwriting. Simple outdoor activities like catching bubbles or tracking clouds, or birds and planes in flight are activities that children enjoy. These kind of activities also stimulate vision development. As their physical capacities increase everyday new things become possible and learning becomes inevitable.



From our head to our toes we are a moving entity, and movement is central to our lives. For the first time in human history however sedentary lifestyles are impacting on peoples health and wellbeing. Knowing what we do about the importance of movement for young children's development, we have a responsibility to ensure that children are afforded ample opportunities for playful movement on a daily basis.

Having an enthused attuned adult for company on these outdoor forays is important. An adult that knows when to lead and when to follow, when to engage and when to step back. Being able to read the young child's cues enables shared communication that enhances interactions and experiences. Sharing such moments with the people in their lives develops trust and allows bonds of attachment to form with both people and place.

A moving experience in every way.

Further Information:

<http://theinspiredtreehouse.com/vestibular>

<http://lemonlimeadventures.com/vestibular-input-sensory-processing/>

Publications:

Every Child a Mover by Jan White

Playing and Learning in the Outdoors by Jan White

Smart Moves: Why learning is not all in your head by Carla Hannaford

The Out of Sync Child by Carol Kranowitz