

Motor Skills



What are motor skills?

- A motor skill is a learned sequence of movements that combine to produce a smooth, efficient action in order to master a particular task.
- The development of motor skill occurs in the motor cortex, the region of the brain that controls voluntary muscle groups.
- For motor skills to develop children must have opportunities to be physically active and be able to move and explore their environment. If there are no opportunities given to move and be active then the co-ordination of motor skills cannot be developed.

Gross Motor

Big movements using large muscles.

- Motor planning
- Postural stability & tone
- Spatial & body awareness
- Bilateral integration
- Midline crossing & Laterality

Fine Motor

Small movements using small muscles.

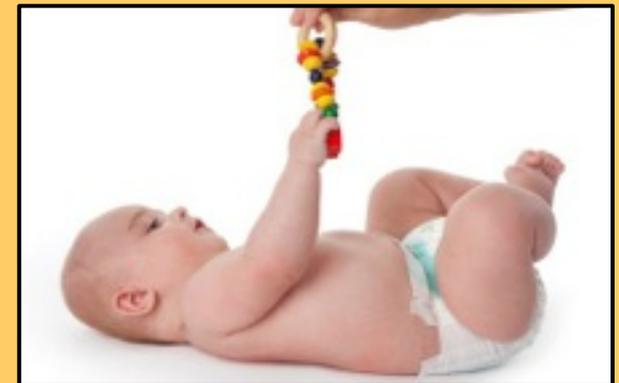
- Visual Motor Integration
- Vision and Ocular Motor Control
- Manual Dexterity

Motor Planning

- Motor planning is the sensory process that allows a child to pick up a new activity or an unfamiliar task, to learn the skill of how to do it automatically.
- A motor skill is something that a child has had to motor plan to learn.

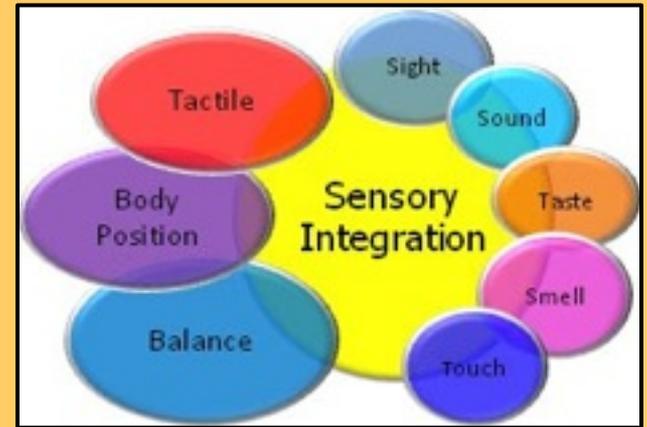


Most of the first movements a child makes in the first six months are automatic. By the time they are playing and learning to manipulate toys their motor planning is developing



Sensory Integration

For effective motor planning a child needs a body that can accept and process accurate sensory information, using their tactile, visual, auditory, proprioceptive and vestibular senses. This is known as sensory integration.



Without motor planning and the ability to process sensory feedback a child cannot learn appropriate motor skills and will fall behind in their motor skills milestones. Children who avoid or are not given opportunities for a wide range of sensory experiences through movement, touch and visual stimulation are likely to have problems with carrying out and learning new tasks efficiently.

Postural Stability

- Postural stability is the ability to keep one body part stable while moving another.
- Good postural stability enables the muscles of the trunk, pelvis, neck and shoulders to continuously work to keep the body upright and the head straight and steady while allowing movement of the arms and legs, so children can freely move to complete certain tasks, such as kicking a football or reaching for a toy.

Tone

Tone refers to the muscles readiness to contract and be ready for action.

Low tone is a reduced readiness.

High tone is an increased readiness.

Spatial

Spatial awareness is the ability to be aware of your place in space and your bodys position in relation to things around you.

Bilateral Integration



Bilateral integration is the ability to use both sides of the body in a co-ordinated way.

Hand dominance impacts on bilateral integration skill development. Hand dominance should be obvious by the time a child is around 5 ½ years old.

If they continue to not have dominance they should be encouraged to adopt a dominant hand as non-dominance will impact on bilateral integration skill efficiency.



Midline crossing &

Midline crossing is the ability to use limbs and eyes across the midline of the body. It means that one hand/side of the body/foot will spontaneously move over to the other side of body when completing a motor task.

Midline is the imaginary line drawn vertically dividing the body into two equal parts. Crossing the midline happens when we cross our ankles, sit cross-legged, fold our arms across our body, reach across to the left to grab something with our right hand or read a page in a book.



Visual Motor Integration

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Ocular Motor & Development

- Visual motor integration is the skill children use to process what they see with their eyes into an appropriate motor movement. It is the ability to co-ordinate visual information with motor output for precise visual guidance of movement.



Vision is the act of sensing with the eyes. In order to process visual stimulus appropriately a child must have good ocular motor control. This refers to the control and co-ordination of a child's eye movements.

To achieve adequate ocular motor control the muscles in each eye must co-ordinate effortlessly to obtain a single unified and clear image for transmission via the optic nerves to the visual cortex.

Manual dexterity

- *Manual dexterity is the ability for the hands and fingers to make co-ordinated movements.*
- *Strong fine motor skills, such as those used with writing, knitting, sewing, and other activities that involve the hands and fingers, rely on manual dexterity.*
- *In young children, manual dexterity is developed normally through routine activities that also require hand-eye co-ordination.*



Thank You
For Listening

