

Music and the Smart Brain

If we watch a baby bob or bounce in response to music, the excitement, the joyful, whole body play it illicit, what is happening to make the baby's brain smarter? The child's responses that we see, are actually evidence that brain changes and thus learning, are occurring. New experiences cause neighbouring neurons in the brain to fire and when this happens repeatedly, chemical changes occur to create strong connections between neurons - "neurons that fire together, wire together". (Norman Doige p63 007).

The baby's brain is responding, through sensory information it receives before abstract cognition is possible. There are critical "windows of opportunity" for learning in young children and babies but neuroscience now suggests that every new experience changes the brain at any age.

As a child masters a simple task like clapping hands to a song or rhyme, many brain tasks are achieved. Along with the movement co-ordination is motor planning and timing, spatial awareness, eye tracking, auditory sequencing, language recognition and beat awareness.

Music offers so many opportunities for new learning, but music that involves listening, visual, tactile and movement experiences, provide the richest learning opportunities. The more senses we involve, the better a child (or an adult) remembers. And where our music activities, using singing, listening and moving, also involve novelty and fun, then we are truly aiding the smart brain.

Here are a few suggestions for creating strong, new brain connections through music - use the familiar as a starting place. Children love what is familiar but for new learning, they need variety.

- try singing a familiar song or rhyme, then try it slowly or quickly, softly or loudly.
- if you usually sit and sing a song, stand and create whole body movements or create a clapping pattern.
- create a simple finger play to a song or rhyme. Our fingers use many brain connections.
- use touch on a song or rhyme eg. a massage for a baby or have preschoolers copy on themselves as you model; massaging the face or hands, or feet or gentle tapping or stroking on the arms or legs
- for toddlers use simple instruments like bells and shakers.
- for preschoolers find objects in the room to create percussion, eg chopsticks on small plastic chairs.
- create a rhythm from a few words or phrase in a song or rhyme. Clap it or play it on percussion instruments.
- provide a diverse range of music to listen to, from many cultures.
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References:

Robyn Stavely who spoke on Orff Schulwerk and Learning at 2011 Orff Conference, printed in Musette 36 Issue1
Norman Doige 2007. The Brain That Changes Itself