Brain Beats Music

What is Proprioception, and Why is it Important?

Proprioception is the unconscious awareness of movement, action and location. It is sometimes referred to as the sense of self. It automatically happens every time your muscles move. Without proprioception, we wouldn't be able to move without thinking about it.

Imagine carrying a jug of water in one hand and a glass in the other. Now imagine trying to walk while simultaneously pouring water into the glass. The number of processes that the body needs to make in order to shift your weight and move your legs as you walk while simultaneously adjusting for the position and changing weight of the jug and the glass in your hands is mind boggling. Almost every muscle in your body is involved in this task, yet somehow our bodies can do this with minimal thinking, and hopefully, without walking into anything or spilling the water. This is an example of complex proprioception.

Our muscles, tendons and ligaments record information about position, space, body awareness and force. Our sense of proprioception is divided into these four areas:

- Position – Where am I?
- Space – Do I fit?
- Body Awareness – What do I look like?
- Force – How hard do I push/pull?

Position is the intuitive knowledge of where you are in space.
It includes:

- Automatic pilot – to be 'at one' with your world
- Sitting – not falling off the chair
- Sleeping – not falling out of bed

Periods of stillness with books, pictures or manipulating figurines can help children to develop their sense of position in relation to objects and others. Listening to *Dinosaur Picnic* is a fun way to enhance positional proprioception.

Spatial Awareness – how big is my body and will I fit through a space? How much space do I take up?
Have you noticed that when you're shopping for clothing you can hold items up and know from looking at them if they are going to fit you? That's proprioception at work. Another example is our ability to walk through a space without bumping into furniture. Proprioception automatically lets us do this, but it is a process that can be fine-tuned. Athletes often have sharpened proprioceptive abilities.

Some problem indicators for children include:

- Having difficulty seeing space – tries to sit in a space that is too small for them.
- Is clumsy.
- Is touchy/feely – runs hands along things while walking.
- Talks with their face close to yours.
- Touches others.
- Plays next to or close to things.

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Movement based songs like *I'm a Ball* can help children to develop spatial awareness as they move freely and rapidly through space.

<u>Body Awareness</u> – having knowledge of one's own body parts and their movement capabilities.
What do my body parts look like and what are they for?
Have you noticed that when young children begin to draw people, they often start with a face that has arms and legs coming out of it? They completely miss the torso from their drawings. Then, as the child's body awareness develops, we see torsos, feet and hands, and later we see necks, shoulders, hips, elbows and knees appear in their drawings. This is evidence of their developing proprioception and often happens as they learn to name these parts of their bodies. Songs that feature different parts of the body help children to become aware of their own body parts and their movement capabilities.

<u>Force</u> – understanding how much force is required to achieve a task.
Without conscious thought, children need to be able to estimate:

- How light/heavy is the object?
- How high/low is the step?
- How hard/soft to push the door?

For example, a child with an underdeveloped sense of force might hold their pencil either too tightly or too loosely. This will make writing or drawing activities in a classroom very frustrating for them. Movement-based music activities using elastic, instruments and holding hands with a partner help children to develop a sense of how much force is required to achieve a task, and their sense of proprioception. Our song *Stretchy Circle*, is a fun way to play with force and proprioception development.

Music for Proprioception Development

At Brain Beats Music we intentionally produce music as a means to encourage children to move and think in ways that drive their proprioception development. Proprioception is an essential skill and is frequently under-developed in young children. What better way to feed our children's brains than enjoying musical activities together!

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