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Thinking with the Dancing Brain: Embodying Neuroscience, Abstract

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# BODY of KNOWLEDGE

## **Thinking with the Dancing Brain: Embodying Neuroscience**

Rima Faber and Sandra Minton

Neurological exploration of the brain is a current internal research frontier. Rima Faber and Sandra Minton co-authored a recently published book, *Thinking with the Dancing Brain: Embodying Neuroscience*. Each chapter in the book addresses thought processes in dance by: describing the processes, explaining the brain networks involved, providing connections to academic classroom pedagogy, applying the information to movement and dance, and guiding the reader through movement explorations and improvisations pertinent to each process. The proposed workshop would follow this format from prime selected portions of the book.

This experiential workshop highlights discoveries about and the embodiment of thought process used in dance in relation to brain function. It links the dancing brain to practice, pedagogy, 21st Century Skills, and provide movement explorations in applications to learning dance. The practical nature of this presentation provides explorations teachers can use to develop thinking skills in their students.

The presentation benefits the field of dance and education by showing that the brain functions discovered through neuroscience research are closely aligned with dance education practices. The connection between dance and neuroscience provides a fresh look at common dance curricula. It places dance education on a level playing field with the other arts and academic areas that are normally included in schools across America. Dance exercises the brain, meets the National Core Arts Standards for Dance, and teaches 21st Century Skills. All of these connections provide advocacy tools for dance educators and for the inclusion of dance in schools.

Little research has been pursued based on the neurology of the artistic processes of dance (creating, performing, responding, and connecting), but a great amount has been learned about how the brain is wired and functions in relation to many thought processes. The workshop and book present a practical approach that focusses on the embodiment of neuroscience discoveries applied to the thought processes used in dance. Learning dance necessitates using mental abilities in observation, analysis, pattern recognition, memory, and transference/transformation of ideas

and knowledge while choreographing relies on imagination, pattern formation and problem solving as well as generating emotional content. The neurology for these thought processes are embodied in movement.