

Sandbox Thinking: Designing Early Childhood Visual Education Through Spatial Memory and Procedural Play

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Abstract

This article is a theoretical and pedagogical continuation of *The Backyard Journey* (Asnaei, 2025), which argued that unstructured childhood play—especially in natural, spatially dynamic environments—can form the cognitive and compositional foundation for complex visual arts practices in adulthood. In this second article, I build upon those insights to propose a new model of art education called *Sandbox Thinking*. This model is grounded in developmental psychology, spatial cognition, and visual learning theory, and is tailored to children aged 8–14.

Through detailed analysis and practical suggestions, I show how symbolic play, procedural logic, and embodied spatial memory can be reframed as artistic building blocks in childhood-centered education. The proposed model offers educators a six-module curriculum that encourages iterative thinking, pattern recognition, and narrative composition without relying on advanced digital tools. Instead, it begins in the mind, body, and environment—eventually extending into optional digital tools such as Cinema 4D. This paper combines empirical studies, pedagogical theory, and lived experience to advocate for a new kind of visual education rooted in emotional memory, material discovery, and the timeless language of shape.

Keywords: early childhood education art education spatial memory procedural thinking creative play visual literacy pedagogical innovation embodied learning childhood imagination curriculum design