



Bibliografía

Abrahamson, D., & Rosenbaum, L. F. (2016, November 3). *Embodied icosahedron* [Participatory activity designed for the Embodied Mathematics, Imagination, and Cognition Working Group]. The 38th annual meeting of the North American chapter of the International Group for the Psychology of Mathematics Education, Tucson, AZ.

Balcomb, F., Newcombe, N. S., & Ferrara, K. (2011). Finding where and saying where: Developmental relationships between place learning and language in the first year. *Journal of Cognition and Development*, 12(3), 315–331.

California Department of Education. (2013). *California Common Core State Standards Mathematics*.

California Department of Education. (2024). *California Preschool/Transitional Kindergarten Learning Foundations*.

California Department of Social Services. (2025). *California Infant/Toddler Learning and Development Foundations*.

Cheng, Y. L., & Mix, K. S. (2014). Spatial training improves children's mathematics ability. *Journal of Cognition and Development*, 15(1), 2–11.

Levine, S. C., Goldin-Meadow, S., Carlson, M. T., & Hemani-Lopez, N. (2018). Mental transformation skill in young children: The role of concrete and abstract motor training. *Cognitive Science*, 42(4), 1207–1228.

Möhring, W., & Frick, A. (2013). Touching up mental rotation: Effects of manual experience on 6-month-old infants' mental object rotation. *Child Development*, 84(5), 1554–1565.

Newcombe, N. S. (2010). Picture this: Increasing math and science learning by improving spatial thinking. *American Educator*, 29–43.

Newcombe, N. S. (2019). Navigation and the developing brain. *Journal of Experimental Biology*, 222(Suppl 1).

Newcombe, N. S., & Huttenlocher, J. (2000). *Making space: The development of spatial representation and reasoning*. Cambridge, MA: The MIT Press



Pruden, S. M., Levine, S. C., & Huttenlocher, J. (2011). Children's spatial thinking: Does talk about the spatial world matter? *Developmental Science*, 14(6), 1417–1430.

Shutts, K., Ornkloo, H., von Hofsten, C., Keen, R., & Spelke, E. S. (2009). Young children's representations of spatial and 13 functional relations between objects. *Child Development*, 80(6), 1612–1627.

Vasilyeva, M., & Lourenco, S. F. (2012). Development of spatial cognition. *Wiley Interdisciplinary Reviews: Cognitive Science*, 3(3), 349–362.

Verdine, B. N., Irwin, C. M., Golinkoff, R. M., & Hirsh-Pasek, K. (2014). Contributions of executive function and spatial skills to preschool mathematics achievement. *Journal of Experimental Child Psychology*, 126, 37–51.

Wakefield, E. M., Foley, A. E., Ping, R., Villarreal, J. N., Goldin-Meadow, S., & Levine, S. C. (2019). Breaking down gesture and action in mental rotation: Understanding the components of movement that promote learning. *Developmental Psychology*, 55(5), 981–993.

