

NCSL Early Learning Fellows Meeting, Minneapolis, MN August 27, 2018
Early STEM Resources

Speaker contact information:

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Useful Websites

DREME Website: URL = <https://dreme.stanford.edu/>

Development and Research in Early Mathematics Education (DREME) is a Heising-Simons Foundation funded network comprised of researchers who collectively approach the issue of early math from multiple perspectives. The DREME Network was created in 2014 to advance the field of early mathematics research and improve young children's opportunities to develop math skills. Network members conduct basic and applied research through four collaborative projects focused on these four priorities:

- **Teacher Educators (TE):** The TE project team creates professional development modules for use in a variety of settings (e.g., live or online college courses, continuing education institutes, and ongoing in-service workshops) to support the development of teacher educators with knowledge of early mathematics related issues. Project lead: Megan Franke, UCLA, meganlfranke@gmail.com
- **Preschool through Elementary Coherence (Cohere):** The Cohere team addresses the disconnect in math learning across the early elementary grades, preschool to Grade 2, which can lead to students to experience uneven instructional practices, which can compromise their learning. Project lead: Cynthia Coburn, Northwestern, cynthia.coburn@northwestern.edu
- **Making More of Mathematics (Math Plus):** The Math Plus team conducts research and development related to resources designed to support increasing the quality and quantity of early math learning opportunities across PreK settings. Project Lead: Michele Mazzocco, Mazzocco@umn.edu
- **Parents and Caregivers Engagement:** The **Family Engagement** project blends research and development toward the experimental testing of books, games, and activities designed to maximize high quality math interactions with preschool children, in order to produce and disseminate resources that families can use to promote math learning among young children. Project lead: Eric Dearing, Boston College, eric.dearing@bc.edu

Zero to Three

Zero to Three has a set of materials for promoting early mathematics in children birth to 36 months.

<http://www.zerotothree.org/child-development/early-development/supporting-early-math-skills.html>

The current set includes “tip sheets” on making math language part of every day routines, math in the grocery store, and more.

Becoming a Math Family

University of Chicago Levine Lab: <https://becomingamathfamily.uchicago.edu/>

Erikson Institute – Early Math Collaborative

<https://earlymath.erikson.edu/>

Select Articles and Books

Bers, M.U. (2018). *Coding as a Playground: Programming and Computational Thinking in the Early Childhood Classroom*. New York, NY: Routledge press.

Clements, DH, and Sarama, J (2011) Early Childhood Mathematics Intervention, *Science*, 333, 968-970.

Ginsburg, H., Lee, J.S. & Boyd, J.S. (2008). Mathematics Education for Young Children: What is it and how to promote it. *Social Policy Report*, Vol 22(1).

Siegler, R. (2009). Improving the numerical understanding of children from low-income families. *Child Development Perspectives*, 3(2), 118-124.

Dehaene, S. (1997/2011). *The Number Sense: How the Mind Creates Mathematics*. Oxford and New York: Oxford University Press. Second edition published in 2011. (Not on early math, but a comprehensive compilation of the research on numerical cognition across species).

National Research Council (2009). *Mathematics Learning in Early Childhood*. Cross, Woods, and Schweingruber, Editors. Committee on Early Childhood Mathematics, Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: National Academies Press. [Available for online reading at www.nas.edu](http://www.nas.edu)