



STEM Theory & Practice: A Booklist for Library Staff

Nurturing Knowledge: Building a Foundation for School Success by Linking Early Literacy to Math, Science, Art, and Social Studies, by Susan B. Neuman and Kathleen Roskos. By linking early literacy to content area learning, we can provide children with the purposeful, knowledge-building experiences they need to be successful readers and writers.

The Young Child and Mathematics – 2nd Edition, by Juanita Copley. This classic resource reflects recent developments in math education in a wealth of vignettes from classrooms, activity ideas, and strategies for teaching young children about math processes and concepts.

Popular Culture, New Media and Digital Literacy in Early Childhood, edited by Jackie Marsh. Offers a range of perspectives of children's multimodal experiences, providing information about the ways children engage with media and digital literacy practices from their earliest years.

Preschool Pathways to Science, by Rochel Gelman, Kimberly Brenneman, Gay Macdonald, & Moisés Román. This resource reviews current thinking about science processes, particularly the scientific method, and science content appropriate for preschoolers.

Math Right from the Start: What Parents Can Do in the First Five Years, Jan Greenberg and Toni S. Bickart, Teaching Strategies.com. Easy-to-read and easy-to-use, this resource for parents of children birth to age five is filled with fun ways to share math every day.

Learning and Teaching Early Math: The Learning Trajectories Approach, by Douglas H. Clements and Julie Sarama. This work is a detailed look at what we know about the developmental path young children take to math understanding and skills.

Mind in the Making: The Seven Essential Life Skills Every Child Needs, by Ellen Galinsky. This book is valuable for its compilation in one place of significant research across the spectrum of children's development – for early math and science, especially Chapter 4. 42 video segments of early childhood researchers at work are available on a two-DVD set, for an additional price.

Adding Math, Subtracting Tension: A Guide to Raising Children Who Can Do Math—Prekindergarten-Grade 2, by Frances Stern. This book from the National Council of Teachers of Mathematics is intended to help parents develop a positive relationship with their child by offering approaches to math and including activities that make it a source of fun.



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Spotlight on Young Children and Math, edited by Derry G. Koralek. Highly readable articles, collected from *Young Children*, reflect the research-based recommendations for practice in the National Association for the Education of Young Children's joint position statement with the National Council of Teachers of Mathematics.

EARLY LEARNING THROUGH BLOCK PLAY

The Block Book (3d ed.), edited by Elisabeth S. Hirsch. This expanded and updated classic helps teachers and other adults working with families of young children discover learning possibilities for block play. It details the rich contributions of blocks to creative and dramatic play, and to science, math, social studies, and other areas of learning.

Blocks and Beyond: Strengthening Early Math and Science Skills through Spatial Learning, by Mary Jo Pollman. This guidebook helps educators seamlessly integrate spatial learning into their everyday curriculum. Focusing on math, science, art and literature, and social studies, this book includes research-based insights and ready-to-use activities to promote the spatial development of children in preschool through third grade.

Teaching Numeracy, Language, and Literacy with Blocks, by Abigail Newburger and Elizabeth Vaughan. This book divides block-building development in young children into stages, then offers suggestions for parents and other adults to facilitate children's learning through block play.

Building Structures with Young Children, by Ingrid Chalufour and Karen Worth. A more detailed, extended *Teaching Numeracy, Language, and Literacy with Blocks*.

Block Play: The Complete Guide to Learning and Playing with Blocks, by Sharon MacDonald. Clear description of what children learn through block play, with building activities and challenges for all stages of development.

The Complete Block Book, by E. Provenzo and A. Brett. In addition to the uses and value of block play for children, this book offers a historical overview of the importance of building with blocks to children's development, covering 200 years.

Block Building for Children: Making Buildings of the World with the Ultimate Construction Toy, by Lester Walker. A highly inspirational book for children and adults.

(Special thanks to Cindy Christin, Bozeman Public Library, for compiling most of these resources)



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