

The Math and Science of Play: Libraries at the Forefront of Early Learning

RESOURCES

The Young Child and Mathematics – 2nd Edition, 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.

Preschool Pathways to Science, 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, easy-to-use, this resource for parents of children 0-5 is filled with fun ways to share math every day.

Learning and Teaching Early Math: The Learning Trajectories Approach, 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, 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 2 DVD set, for an additional price.

Adding Math, Subtracting Tension: A Guide to Raising Children Who Can Do Math—Prekindergarten-Grade 2, 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.

Spotlight on Young Children and Math, Derry G. Koralek, ed.

All of the highly readable articles here, 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.), Elisabeth S. Hirsch, ed.

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, 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 grade 3.

Teaching Numeracy, Language, and Literacy with Blocks, 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, 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, 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, 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, Lester Walker

Focusing on combinations of basic building components, then providing detailed "blueprints" for 18 structures, this is a highly inspirational book for children and adults.

WEBSITES

What's the Big Idea?: <http://bigidea.mothersgooseprograms.org/>

ECRR: www.everychildreadytoread.org (the Toolkit: "Fun with Science and Math")

Parenting Science: <http://www.parentingscience.com/preschool-math-lessons.html>

Parenting Science: <http://www.parentingscience.com/preschool-science-activities.html>

National Institute for Early Education Research: <http://nieer.org/psm/?article=298>

National Association for the Education of Young Children: www.naeyc.org

National Council of Teachers of Mathematics: www.nctm.org

Community Playthings: <http://www.communityplaythings.com/products/blocks/video/video.html>