## 10 Playful Math Activities

Parents Magazine





Audience: Families

Types of Resources: Activities, articles, children's books, resource lists, videos

Availability in Other Languages: None

This article by Deborah Stipek offers families ideas to support children's early math learning during playful interactions. It provides helpful math strategies for families to consider while exploring math with their infants, toddlers, and preschoolers. Suggested strategies and ideas are centered around routines and activities such as reading books, cooking, and grocery shopping. A short video at the end of the article includes more ideas for how to engage young children in math during daily routines. A few other math-related resources are linked below the article.

### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatial Relationships Problem Solving

Number Sense

Classification

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry











# A Greater Role in Math Education for Parents: Mathematical Reasoning at Home



EdSource

https://edsource.org/2012/a-greater-role-in-math-education-for-parents-mathematical-reasoning-at-home/23918

Audience: Families

Types of Resources: Activities, articles

Availability in Other Languages: None

This article by Katie Kormanik shares how families can encourage mathematical reasoning skills in preschool-aged children. It describes how children develop mathematical reasoning skills and how adults support children in this area. The article includes strategies such as "Estimate, Estimate, Estimate," "Be Financially Savvy," "Read the News," and "Play Games" to incorporate meaningful math reasoning into a family's daily life experiences. In addition, EdSource provides family members free information and strategies to support math learning during routines and home activities such as shopping for groceries, playing games, and handling money.

### Math Area Addressed in Resource

#### California Preschool Foundations

Number Sense











## All About Young Children

California Department of Education <a href="https://allaboutyoungchildren.org/english/#">https://allaboutyoungchildren.org/english/#</a>



Audience: Families

Types of Resources: Activities, modules, tip sheets, videos

Availability in Other Languages: All content is available in Spanish, Russian, Hmong, Tagalog,

Chinese, and Chinese Traditional. Videos include subtitles in these languages.

All About Young Children provides families with information on children's development of number sense from birth through age 5. The website is organized by domain of development and by age (e.g., birth to 8 months, 18–36 months). Videos and tips for families discuss general information about how children learn number concepts and the ways that family members can support young children's math learning. Strategies to support math learning are focused on daily routines such as cooking and grocery shopping. A narration of the activities and behaviors represented in the videos is included to provide greater access to family members who are blind or visually impaired.

### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Number Sense

### California Preschool Foundations

Number Sense Algebra & Functions Measurement











## Becoming a Math Family

University of Chicago, STEM Education <a href="https://becomingamathfamily.uchicago.edu/">https://becomingamathfamily.uchicago.edu/</a>



Audience: Families

Types of Resources: Activities, live chat, modules, videos

Availability in Other Languages: None

Becoming a Math Family provides resources to raise early math awareness and describe math content for families of children ages three to six. The organization has three core beliefs around math: "Math is a Process," "Math is Everywhere," and "Math is Social." The website includes a live chat feature that allows families to share their personal math stories and ask questions of the organization's math learning team. The website also shares advice on how to spark a child's interest in math and promote a positive math attitude. Other resources include family toolkits and activities to try at home. Many activities contain a video explaining different ways to do the activities, the math concepts associated with the activities, and the appropriate age levels. Access to the website is free but requires log-in credentials to view some of the materials.

### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry

Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality

Operations & Algebraic Thinking

Number & Operations in Base Ten

Measurement & Data











### **Bedtime Math**

Bedtime Math Foundation <a href="http://bedtimemath.org/bedtime-math-for-families/">http://bedtimemath.org/bedtime-math-for-families/</a>



Audience: Educators, families, children

**Types of Resources:** Activities, articles, blog, modules, resource lists, videos **Availability in Other Languages:** Some resources are available in Spanish.

Bedtime Math provides resources for educators, families, and children to support the math learning of children in preschool and early elementary school. Resources focus on how to integrate math into family routines and play. For example, a nightly math problem is posted on the website for families to solve with children during bedtime routines. Other resources include free math apps for children and kits for an after-school math club called Crazy 8s. The Bedtime Math website provides information and brochures for educators to promote family engagement in math. Most resources on the website are free, but the children's books are available for purchase.

### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry

Mathematical Reasoning

### **Common Core Math Standards**

Counting & Cardinality

Operations & Algebraic Thinking

Number & Operations in Base Ten

Number & Operations—Fractions

Measurement & Data











### **Common Core State Standards**

California Department of Education

https://www.cde.ca.gov/re/cc/



Audience: Educators, families

Types of Resources: Modules, resource lists, videos

Availability in Other Languages: The site provides a link to Common Core en Español, which

offers a translation of the Common Core State Standards.

The California Department of Education has compiled this list of resources to support elementary school teachers implementing the Common Core State Standards. It highlights an implementation guide that includes the math standards, videos, and print resources to align a classroom curriculum with the standards. It provides additional lists of resources for teachers, administrators, families, and community partners. These lists link to resources within the California Department of Education website as well as tools from outside developers (e.g., Inside Mathematics, California Early Math Project).

### Math Areas Addressed in Resource

#### Common Core Math Standards

Counting & Cardinality

Operations & Algebraic Thinking

Number & Operations in Base Ten

Number & Operations—Fractions

Measurement & Data











# **Common Core State Standards in Mathematics**



Common Core State Standards Initiative <a href="http://www.corestandards.org/Math/">http://www.corestandards.org/Math/</a>

**Audience:** Educators, families **Types of Resources:** Articles

**Availability in Other Languages:** Some information for families is translated into Spanish. The site provides a link to Common Core en Español, which offers a translation of the Common

Core State Standards.

The Common Core State Standards Initiative provides free information for families and educators that explain the math standards for children in kindergarten through twelfth grade. All math standards are listed and described, according to grade levels. In addition, educators and families can learn more about how the Common Core State Standards were developed and why they are important. The site also provides versions of the Math Common Core State Standards that are compliant with the American Disabilities Act.

### Math Areas Addressed in Resource

#### **Common Core Math Standards**

Counting & Cardinality

Operations & Algebraic Thinking

Number & Operations in Base Ten

Number & Operations—Fractions

Measurement & Data











# Development and Research in Early Math Education



Stanford University Graduate School of Education <a href="https://dreme.stanford.edu/">https://dreme.stanford.edu/</a>

Audience: Educators, families, children

Types of Resources: Activities, articles, blog, modules, resource lists, videos

Availability in Other Languages: None

The Development and Research in Early Math Education (DREME) website provides resources for educators and families that address math for children from birth through age eight, with an emphasis on the preschool years. Educator modules are organized around math content areas. Each module includes activities, handouts, informational videos, and classroom vignettes. The first module includes two articles that provide information on how to support the math development of children who are dual language learners. In addition, the DREME website provides families with strategies and resources to support children's math learning at home. The blog lists articles with guidance for families on how to facilitate math learning with young children in varied topics. Topics range from choosing children's books on math to supporting children's problem-solving skills.

### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatical Relationships Problem Solving Number Sense Classification

## California Preschool Foundations

Number Sense

Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Number & Operations in Base Ten
Number & Operations—Fractions
Measurement & Data
Geometry











# Early Childhood Learning and Knowledge Center



Office of Head Start

https://eclkc.ohs.acf.hhs.gov/

Audience: Educators, families

Types of Resources: Activities, articles, books, children's books, games, lesson plans, modules,

resource lists, tip sheets, videos, webinars

**Availability in Other Languages:** The website is translated into Spanish.

The Early Childhood Learning and Knowledge Center (ECLKC) includes resources for educators and families on children's early math development and learning. For example, the Interactive Head Start Early Learning Outcomes Framework describes children's developmental progressions in mathematics from birth through age five along with a list of related resources. The Effective Practice Guides provide teaching practices that educators can use to support children's early math development. High Five Mathematize is a professional development tool that includes a webinar and a downloadable PDF. The webinar includes videos of teachers supporting early math, and the PDF includes activities, tips for supporting math learning, children's book recommendations, and lists of resources. In addition, the website offers several other articles, videos, tip sheets, podcasts, and webinars, all locatable through a search function. Finally, the article "A Family Note on Finding the Math" presents information on how families engage with children to support early math learning during play, family routines, and math activities.

### Math Areas Addressed in Resource

#### California Infant/Toddler Foundations

Spatial Relationships Problem Solving Number Sense

Classification

#### California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning











## **Early Math**

First 5 California

http://www.first5california.com/learning-center.aspx?id=30&sub=149



Audience: Families

Types of Resources: Activities, articles, resource lists, tip sheets, videos

**Availability in Other Languages:** The website and all resources are available in Spanish.

First 5 California provides activities and information for families to support early math learning for infants, toddlers, and preschoolers. Under the "Learning Center: Early Math" tab, families can learn more about the importance of early math concepts and understand ways that they can engage children in math in their daily routines. The "Activity Center" tab groups different family activities by age (infants, toddlers, preschoolers), with some math activities embedded throughout such as "Measure Your Treasure" for toddlers and "Bird Watching" for preschoolers.

#### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatial Relationships

Problem Solving

Number Sense

Classification

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry











## **Early Math and Science**

Zero to Three

https://www.zerotothree.org/early-learning/early-math-and-science



Audience: Educators, families

Types of Resources: Activities, articles, books, videos

**Availability in Other Languages:** Most resources are translated into Spanish.

The Early Math and Science resources help families and educators support math learning for children from birth through age three. Articles and videos for families explain different math concepts and share ways that family members can embed math learning into their children's home routines and play. For example, the article "Making Math Language an Everyday Part of Your Routines" describes how to use math vocabulary to introduce math concepts during diaper changes, grocery store visits, and more. The website provides information for educators to learn more about children's early math learning and gives examples of math activities. Educators may also find it useful to share the website's math resources with families. Most resources are free, but some require paid membership to access.

#### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatial Relationships Problem Solving

Number Sense

Classification

### California Preschool Foundations

Number Sense Algebra & Functions

Measurement

Geometry











### **Early Stem Education**

U.S. Department of Education: Office of Innovation and Improvement <a href="https://innovation.ed.gov/what-we-do/stem/early-stem-education/">https://innovation.ed.gov/what-we-do/stem/early-stem-education/</a>



Audience: Educators, families

Types of Resources: Activities, tip sheets

Availability in Other Languages: Tip sheets are available in Spanish.

This website shares tips with families and educators to engage children in science, technology, engineering, and math (STEM) concepts. It discusses the importance of early math and lists various activities for families and educators to try with children. For example, the tip sheet "Let's Talk, Read, and Sing About STEM" describes what STEM is and how to apply STEM concepts into children's everyday routines and play. The tip sheets discuss the importance of families and educators using children's home languages with dual language learners. It also encourages collaboration between families, educators, and service providers to meet the unique learning needs of children with disabilities.

#### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatial Relationships

Problem Solving

Number Sense

Classification

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry











# **Engaging Children in Early Mathematical Experiences: Mathematics Handbook**



California Preschool Instructional Network

https://cpin.us/sites/default/files/fcab\_resources/fcab\_res\_math/fcab\_mat\_thprac/Engaging%20Children%20in%20Early%20Mathematical%20Experiences.pdf

Audience: Educators, families

Types of Resources: Activities, books, children's books, resource lists, tip sheets

Availability in Other Languages: None

Engaging Children in Early Mathematical Experiences: Mathematics Handbook is a stand-alone publication that presents research and activities related to the California Preschool Foundations in math for educators and families. The handbook includes a chapter about each math strand. The chapters introduce research about early math, recommend related children's books, and suggest activities and tips to foster children's learning in that area. The handbook includes "guidance for parents" sections that provide some strategies to support math, such as following the child's lead and repeating experiences.

### Math Areas Addressed in Resource

#### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry











### **First 8 Studios**

WGBH http://first8studios.org/



Audience: Educators, families, children

Types of Resources: Activities, blog, children's books, games, lesson plans, videos

Availability in Other Languages: None

First 8 Studios offers math games for children, as well as supplementary resources for educators and families. The educator section introduces nine math apps most appropriate for preschool children. In addition, it provides supplementary resources for teachers, such as a blog with brief videos about using math talk in the classroom. It also includes an Early Math Teacher's Guide that contains hands-on activities, book suggestions, and information about core skills targeted by the apps. Resources for families address different math strands from those labeled for educators. The site suggests games and activities to play with children at home and also offers children's book suggestions and tips for encouraging spatial reasoning through daily interactions such as meals, walks around the neighborhood, and play. Though teacher resources and family resources target different skills and offer different types of resources, families and teachers could use both sets of resources as appropriate. No registration is required, but children's games are free apps available only for iPads.

### Math Areas Addressed in Resource

#### California Preschool Foundations

Number Sense

Algebra & Functions











### Get Ready to Read: Early Math

National Center for Learning Disabilities <a href="http://www.getreadytoread.org/early-learning-childhood-basics/">http://www.getreadytoread.org/early-learning-childhood-basics/</a> early-math/early-math-matters-a-guide-for-parents-of-preschoolers



Audience: Educators, families

Types of Resources: Activities, articles, resource lists

**Availability in Other Languages:** Some resources are available in Arabic, Chinese, Korean,

Spanish.

Get Ready to Read offers resources for educators and families that discuss children's math learning in preschool. Articles for educators and families describe children's early math development. They also share tips for how to support children's math skills, along with some specific activities. The website offers some information for educators and families to identify if a child has a learning disability related to math.

### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry











### **Hour of Code Activities**

Hour of Code https://hourofcode.com/us/learn



Audience: Educators, families, children

**Types of Resources:** Activities, modules, resource lists, tip sheets, videos, webinars **Availability in Other Languages:** Some website content is provided in 45 languages.

The Hour of Code includes resources for educators, families, and children to provide all children, including those from underrepresented backgrounds, access to computer science and coding. Resources for educators include videos, sample lesson plans, and a how-to guide for offering code-related activities in classrooms. The website also features videos and a how-to guide for families to introduce computer science and coding. Resources for children include videos, online games, and activities to explore computer science. Many of the online resources engage children in using their math knowledge. Children can sort the games by level of difficulty, topic, age, and length. Similarly, the online activities can be searched by the type of digital device the child is using. Other resources include videos and links to circuitry content.

#### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry

Mathematical Reasoning

### **Common Core Math Standards**

Counting & Cardinality
Operations & Algebraic Thinking
Number & Operations in Base Ten
Number & Operations—Fractions
Measurement & Data
Geometry











# Learning Together at Home & Math Instruction for ELLs



Colorín colorado

For parents: <a href="http://www.colorincolorado.org/learning-together-home-math">http://www.colorincolorado.org/learning-together-home-math</a>

For teachers: http://www.colorincolorado.org/teaching-ells/content-instruction-ells/math-instruction-ells

Audience: Educators, families

Types of Resources: Activities, articles, books, children's books

**Availability in Other Languages:** The website is translated into Spanish.

Colorín Colorado provides resources for families and educators on how to integrate math learning concepts with bilingual education. It is very accessible to both Spanish and English speakers. The website provides articles for families and a video sharing how a parent incorporates math concepts at home. In addition, it connects early math and literacy concepts for children and families by referencing children's books with relevant math resources. For educators, the website discusses how teachers can adjust their teaching strategies and word problems to better fit dual language learners' skills in the classroom.

### Math Areas Addressed in Resource

#### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry

Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Measurement & Data











## Making Math a Family Thing

Harvard Graduate School of Education/Margaret Caspe <a href="https://www.gse.harvard.edu/news/uk/18/01/making-math-family-thing">https://www.gse.harvard.edu/news/uk/18/01/making-math-family-thing</a>



Audience: Educators, families

Types of Resources: Activities, articles, resource lists

Availability in Other Languages: None

"Making Math a Family Thing" is an article that shares tips and strategies for how educators and families can support young children's math learning and exploration. A few suggestions for families are using math talk, providing children time to solve math dilemmas, and reading math books. Educators are encouraged to communicate with families around developmentally appropriate math expectations and to understand how families use math in their daily routines. The article ends with a list of additional resources for families and educators.

#### Math Areas Addressed in Resource

## California Infant/Toddler Foundations

Problem Solving Number Sense

# California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Geometry











### Math at Home

Mathematics Education Collaborative <a href="http://www.mec-math.org/math-at-home/">http://www.mec-math.org/math-at-home/</a>



Audience: Educators, families

Types of Resources: Activities, resource lists, tip sheets

Availability in Other Languages: None

The Math at Home section of the Mathematics Education Collaborative website outlines different math activities and information for families and educators. It presents strategies and tips for families to use while engaging children in early math learning experiences at home. For example, the "Helping with Homework" subsection illustrates a list of different responses for family members when children get stuck while doing math homework. Other related resources include a list of family math games to play at home and more math-related websites to explore. The website also offers, for a fee, workshops and webinars for educators that highlight children's number sense concepts. Special attention in these educator resources is focused on empowering elementary students to make sense of math that is meaningful to them. In addition, educator resources address how to teach math to children who are dual language learners.

#### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense Geometry

Mathematical Reasoning

### **Common Core Math Standards**

Counting & Cardinality

Operations & Algebraic Thinking











### Math at Home

University of Illinois at Chicago, College of Education <a href="http://mathathome.org/">http://mathathome.org/</a>



Audience: Educators, families, children

Types of Resources: Activities, articles, blog, books, children's books, games, lesson plans,

modules, resource lists, tip sheets, videos

Availability in Other Languages: None

Math at Home provides resources and professional development opportunities for educators and families to support math learning of children from infancy to age five. Videos and articles explain early math concepts and how educators and families can set up math environments. Early Math Matters is a free eight-session course for families and educators to learn more about varied math topics and to obtain certificates for professional development hours. Additionally, educators can use this resource to map out activities according to the standards created by the National Council for Teachers of Mathematics. A number of blog entries address supporting children with disabilities, such as "How to Create Math Spaces for All" and "Math and Measuring: Differentiating Activities for All Learners." Most resources are available without registration, but Early Math Matters requires creating a free account.

### Math Areas Addressed in Resource

#### California Infant/Toddler Foundations

Spatial Relationships

Problem Solving

Number Sense Classification

Number Sense

Algebra & Functions

Measurement

Geometry

Mathematical Reasoning

California Preschool Foundations











### Math at Home Guides

California Mathematics Council <a href="https://www.cmc-math.org/math-at-home-guides">https://www.cmc-math.org/math-at-home-guides</a>



Audience: Educators, families

Types of Resources: Activities, articles, books, resource lists

**Availability in Other Languages:** Math at Home Guides are available in Spanish.

The California Mathematics Council has written two parenting guides that cover children's math learning from birth to age eight. These Math at Home resources describe the following math topics: "Making Math Part of Your Family's Life," "Connecting Math and Reading," and "The Role of Play in Learning Math." They also provide information on how to set up enriching math environments at home and math activities for families to do with their children. The parenting guides also provide strategies to engage dual language learners in math. A list of online teaching resources is provided in the Resources tab (select Teaching). These resources for educators include topics such as math festivals, using math in practical life situations, and connecting students to virtual manipulatives.

### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatical Relationships
Problem Solving
Number Sense
Classification

# California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Number & Operations in Base Ten
Number & Operations—Fractions
Measurement & Data
Geometry











### **NAEYC Math Resources**

National Association for the Education of Young Children <a href="https://www.naeyc.org">https://www.naeyc.org</a>



Audience: Educators, families

Types of Resources: Activities, articles, blog, books, children's books, tip sheets, webinars

Availability in Other Languages: Some math articles are in Spanish.

The National Association for the Education of Young Children (NAEYC) provides resources for families and educators of children from birth through age eight. Most resources are in article or blog form and contain many practical suggestions for how to support early math learning in the classroom and at home. For families, resources discuss the role that parents have in supporting children's early math learning and provide an assortment of activities. Topics include math talk, visualizing math with children, and ways to build math learning into the day. Educators can watch recorded webinars through the Professional Development page under the Resources tab and read articles about teaching practices to facilitate children's early math learning. A few articles, such as "Make Math Meaningful to Diverse Learners," discuss how to support dual language learners while learning math concepts, highlighting different teaching practices that consider children's existing knowledge of the math manipulatives, concepts, and vocabulary. Many resources are free, but some articles require a paid membership to NAEYC.

### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatical Relationships
Problem Solving
Number Sense
Classification

## California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Number & Operations in Base Ten











### **Resource Center**

Intercultural Development Research Association <a href="https://www.idra.org/resource-center/building-numeracy-skills-in-early-childhood/">https://www.idra.org/resource-center/building-numeracy-skills-in-early-childhood/</a>



Audience: Educators, families

Types of Resources: Activities, articles, podcasts

Availability in Other Languages: The IDRA website is translated into 104 languages, but some

videos and podcasts are only in English.

The Intercultural Development Research Association (IDRA) has developed multiple podcasts for families and educators that bring awareness of how to provide equitable early math experiences for young children. For example, podcasts feature math topics such as "Building Numeracy Skills in Early Childhood," "Visual Literacy in Math and Science," and "Parents Modeling Math in Everyday Life." Educators can find information around teaching math concepts with children who are dual language learners, building partnerships with families, and creating meaningful math experiences for their preschool and elementary students. Each podcast provides links to additional websites or resources for family members and educators to explore the topic in greater depth.

#### Math Areas Addressed in Resource

# California Infant/Toddler Foundations

Problem Solving Number Sense

## California Preschool Foundations

Number Sense Mathematical Reasoning

### **Common Core Math Standards**

Counting & Cardinality











### Resources for Early Learning





Audience: Educators, families, children

Types of Resources: Activities, articles, books, children's books, games, lesson plans, modules,

tip sheets, videos

Availability in Other Languages: Some tips, articles, and activities are available in Spanish.

The Resources for Early Learning website provides general information, resources, and activities for families, educators, and children from infancy to preschool. Parenting module videos share how children learn early math concepts and offer "Try This" prompts for families to do at home. The educator page provides information on children's math development, teaching practices, and professional development modules dedicated to early math learning. Nine comprehensive curriculum units, each describing two to four weeks of classroom activities and learning goals, are available for educators. Additional features of this website include an activity search bar and a special page for children to explore math games and videos.

#### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatial Relationships

Problem Solving

Number Sense

Classification

### California Preschool Foundations

Number Sense

Algebra & Functions

Measurement

Geometry











# **Teaching Math to Young Children Practice Guide**



Institute of Education Sciences, What Works Clearinghouse <a href="https://ies.ed.gov/ncee/wwc/PracticeGuide/18">https://ies.ed.gov/ncee/wwc/PracticeGuide/18</a>

Audience: Educators, families

Types of Resources: Activities, books, tip sheets

Availability in Other Languages: None

The Teaching Math to Young Children Practice Guide is a digital book for teachers, administrators, and families. It presents five evidence-based recommendations that guide readers to build on children's natural interest in math and mathematical thinking. The recommendations address strands of math, processes for assessment and progress monitoring, and guidance for integrating math into children's daily experiences and conversations. The resource is unique in how it presents research findings and evaluates the strength of the evidence. Each chapter focuses on one recommendation, presenting the evidence behind it, offering strategies for how to implement it, providing example activities that support it, and outlining potential challenges for children with some concrete solutions. The website includes a PDF of the guide itself, a summary that includes the recommendations and brief strategies for implementing them, a six-page brochure that introduces the guide, and the guide in an e-book format for mobile devices and e-readers.

### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Number & Operations in Base Ten
Measurement & Data
Geometry











# Helping Your Child Develop Early Math Skills



Michigan State University and Michigan State Extension

https://www.canr.msu.edu/news/helping\_your\_child\_develop\_early\_math\_skills

Audience: Families

**Types of Resources:** Activities, articles **Availability in Other Languages:** None

This article by Kittie Butcher and Janet Pletcher shares how families can support a sense of numeracy in infants, toddlers, and preschoolers. It describes the importance of early numeracy for young children's development and explains the different numeracy concepts. Suggested activities and games are highlighted for families to try at home. Links to a few other math-related articles are provided.

Math Areas Addressed in Resource	
California Infant/Toddler Foundations	California Preschool Foundations
Number Sense	Number Sense
	Algebra & Functions
	Measurement
	Mathematical Reasoning









### Learn & Grow: Math

PBS Kids for Parents

http://www.pbs.org/parents/education/math/math-tips-for-parents



Audience: Families, children

Types of Resources: Activities, articles, books, games, modules, tip sheets, videos

Availability in Other Languages: None

PBS Kids for Parents provides resources for parents of children from ages two to eight, highlighting the importance of early math learning and ways to engage children in math experiences. The "Learn & Grow: Math" section of the website discusses math benchmarks that children pass through as they grow and learn. Here, families can select a specific age group and math topic (e.g., patterns, shapes, or numbers and counting) to learn about children's learning in that topic and related activities families and children can engage in. PBS Kids for Parents also includes specific strategies for engaging children with disabilities in early math experiences. On the PBS Kids webpage, <a href="https://pbskids.org/">https://pbskids.org/</a>, a host of episodes, games, albums, and apps are available for children to explore.

### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatical Relationships
Problem Solving
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Classification

# California Preschool Foundations

Number Sense
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### Common Core Math Standards

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Geometry











## Sesame Street Math Is Everywhere

Sesame Workshop

https://www.sesamestreet.org/toolkits/math



Audience: Families, children

Types of Resources: Activities, children's books, games, tip sheets, videos

Availability in Other Languages: Some of the website and resources (activity sheets and

videos) are translated into Spanish.

Sesame Street Math Is Everywhere discusses early math learning for families of children from birth through age eight. Videos highlight different math concepts and how families can support early math learning. Tip sheets provide activities for families to support math learning indoors, outdoors, and on the go. Other math resources include printable stories for families to read with children and activity sheets. Resources for children include free online math games and videos featuring the Sesame Street characters. The website allows parents to select and monitor which games and videos their child can explore. Although the Sesame Street Math Is Everywhere app is available for purchase on iTunes, the majority of the web resources are free. Some resources require log-in credentials to use them.

#### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatical Relationships
Problem Solving
Number Sense
Classification

## California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### Common Core Math Standards

Counting & Cardinality
Operations & Algebraic Thinking
Measurement & Data
Geometry











## Talking Is Teaching

Too Small to Fail <a href="http://talkingisteaching.org/resources/math">http://talkingisteaching.org/resources/math</a>



Audience: Families

Types of Resources: Activities, children's books, tip sheets, videos

Availability in Other Languages: Some of the website and resources (e.g., tip sheets, videos)

are available in Spanish.

The Talking is Teaching website provides resources to raise families' awareness around the importance of early math learning for children's future growth and development. A series of interactive videos and math articles describes different math concepts from infancy to preschool. Videos in the form of modules and early math topics present the ways that families can facilitate children's math learning in a child's daily routines and play. Other information includes family tips for early math learning, handouts with parent–child activities, and suggested math questions to ask children during different parts of the day. Narrated family videos highlight children's natural exploration of math concepts in play. Some of the website's resources invite families to speak in their home languages.

#### Math Areas Addressed in Resource

### California Infant/Toddler Foundations

Spatial Relationships
Problem Solving
Number Sense
Classification

### California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning











### Youcubed

Stanford University Graduate School of Education <a href="https://www.youcubed.org/">https://www.youcubed.org/</a>



Audience: Educators, families, children

Types of Resources: Activities, articles, books, games, podcasts, resource lists, videos

Availability in Other Languages: The website is translated into Portuguese. Some resources

are offered in Spanish.

Youcubed offers resources on kindergarten through twelfth-grade math learning for educators, families, and students. Resources for educators focus on early math development, teaching, and assessment. Free articles and videos enhance teachers' knowledge of the "Mathematical Mindsets" approach to education. The website also provides several math activities (e.g., tasks, games) that can be filtered by grade level. Some resources highlight different math learning trajectories and strategies to support children who have learning disabilities. Articles and books for parents describe how a family's math beliefs influence children and provide strategies to engage elementary school children in math learning at home. Student resources include games, apps, and videos. The organization also provides books and professional development products (e.g., online courses, inperson workshops) for an additional fee.

### Math Areas Addressed in Resource

#### Common Core Math Standards

Counting & Cardinality

Operations & Algebraic Thinking

Number & Operations in Base Ten

Number & Operations—Fractions

Measurement & Data











## Young Mathematicians

Education Development Center <a href="http://youngmathematicians.edc.org">http://youngmathematicians.edc.org</a>



Audience: Educators, families

Types of Resources: Activities, articles, books, children's books, tip sheets, videos

Availability in Other Languages: Books, printouts, and some of the website content are

written in Spanish.

The Young Mathematicians website brings math awareness to families and educators of preschooland early elementary—aged children. It provides a series of articles highlighting "The Mindset for Learning" and encouraging children's math experiences. Families and educators can find a list of published math-related children's books. Family math tip handouts explain "5 Ways That Playing Games Helps Children Learn Math" and "5 Ways to Help Young Children Love Math." For educators, the site provides informational articles and activities. Activities include materials lists, detailed descriptions of the targeted skills and developmental trajectories, and supports for assessment of students' learning. Educators are provided math printout books to send home to families.

### Math Areas Addressed in Resource

### California Preschool Foundations

Number Sense
Algebra & Functions
Measurement
Geometry
Mathematical Reasoning

### **Common Core Math Standards**

Counting & Cardinality
Operations & Algebraic Thinking
Geometry









