

Summer Math Ideas – Early Childhood (K)



- Play card or board games. See enclosed list of commercial games that use mathematics.
- Keep track of your activities on the calendar. Count how many more days there are until a family vacation or special event.
- Cook together. Cooking involves reading numbers, counting, measuring ingredients, measuring time, and sequencing.
- Look for numbers all around—on the mailbox, telephone, book pages, houses, restaurant menus, gas pumps, and so on.
- Write numbers in the sandbox, dirt, play dough, or on the sidewalk with chalk. Use play dough to create 3-dimensional numbers.
- Measure and record how tall your child is at the beginning of the summer, then again at the end. Compare to see how much he or she has grown.
- Visit a local zoo or farm and observe and describe the many different kinds and sizes of animals, as well as the patterns of animal markings.
- Prepare a picnic with various geometric shapes (sandwiches in triangular, rectangular, and square shapes, cylindrical cans, cubes of cheese, and so on).
- Follow the maps you find at the zoo, museum, or even the grocery store.
- Incorporate mathematics on a family trip: What size suitcase will you need? How many shirts or pairs of socks? Collect shells, rocks, or postcards from your destination and sort your collection.
- When traveling in a car or bus, notice the shapes of the road signs and look for numerals on signs, buildings, and other vehicles. Your child can tally the shapes seen, or look for numbers in order as you read signs.
- Look for geometric shapes around the house, at the grocery store, at the park, in the mall, or anywhere you go! Notice both 2- and 3-dimensional shapes.
- Choose math-related books from the library and read them together. See the Literature List in this packet.
- Go to www.paloaltoparentresources.wordpress.com for links to free internet resources for mathematics games and activities.



Commercial Games that Use Mathematics



Many games you have at home or see at the local store involve mathematical thinking. Children develop their skills in an almost effortless way when they play these games with each other and adults.

Counting, Adding, and Subtracting

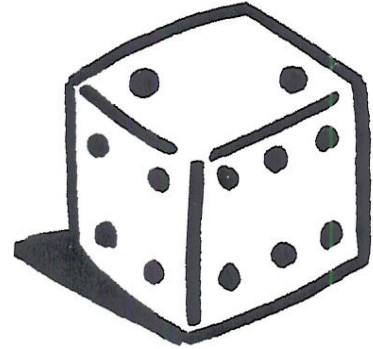
Candy Land®
Chutes and Ladders®
Hi Ho! Cherry-O®
hopscotch
The Cat and the Fiddle™
Cootie®

Attributes, Patterns, and Geometry

Barrel of Monkeys®
bingo
mazes
puzzles
Go Fish (traditional or commercial)
Old Maid
Crazy Eights (traditional or commercial)
tangrams
rummy

Strategy and Spatial Perception

The a-MAZE-ing Labyrinth®
checkers
Clue® Jr.
Connect Four®
mancala (traditional or commercial)
memory (many names exist for this game of matching face-down pictures)
Pretty Pretty Princess®
tic-tac-toe
Don't Spill the Beans®
Ants in the Pants®



More excellent games can be found on the Internet by searching under “educational math games.”

Literature List for Early Childhood



Your child will enjoy reading literature related to mathematics at home. Many of these titles can be found at your local library.

Numeration

1 Is One

Tasha Tudor
Scholastic, 2000

12 Ways to Get to 11

Eve Merriam
Aladdin Paperbacks, 1996

Anno's Counting Book

Mitsumasa Anno
HarperTrophy, 1986

Arctic Fives Arrive

Elinor J. Pinczes
Houghton Mifflin, 1996

*Can You Count Ten Toes?: Count to
10 in 10 Different Languages*

Lezlie Evans
Houghton Mifflin, 2004

Eating Fractions

Bruce McMillan
Scholastic, 1991

Eating Pairs

Sarah L. Schuette
Capstone Press, 2003

Fraction Action

Loreen Leedy
Holiday House, 1996

Give Me Half

Stuart J. Murphy
HarperTrophy, 1996

One Hundred Ways to Get to 100

Jerry Pallotta
Scholastic, 2003

One Is a Snail, Ten Is a Crab

April and Jeff Sayre
Candlewick, 2003

Ten Apples Up On Top

Theo. LeSieg
Random House, 1961

Ten Black Dots

Donald Crews
Scholastic, 1992

Ten, Nine, Eight

Molly Bang
Greenwillow, 1996

Ten Red Apples

Pat Hutchins
Greenwillow, 2000

Two of Everything:

A Chinese Folktale

Lily Toy Hong
Albert Whitman & Co., 1993

Two Ways to Count to Ten

Ruby Dee
Henry Holt and Company, 1988

What Comes in 2s, 3s, and 4s?

Suzanne Akers
Aladdin, 1992

Number Stories and Operations

Animals on Board

Stuart J. Murphy
HarperTrophy, 1998

The Doorbell Rang

Pat Hutchins
Greenwillow Books, 1986

Each Orange Had 8 Slices
Paul Giganti
HarperTrophy, 1999

Math Fables
Greg Tang
Scholastic, 2004

More, Fewer, Less
Tana Hoban
Greenwillow, 1998

My Little Sister Ate One Hare
Bill Grossman
Dragonfly, 1998

One More Bunny:
Adding From One to Ten
Rick Walton
HarperCollins, 2000

Quack and Count
Keith Baker
Voyager, 2004

Spaghetti and Meatballs for All
Marilyn Burns
Scholastic, 1999

Splash
Ann Jonas
HarperTrophy, 1997

This Old Man
Pam Adams
Child's Play International Ltd.,
2000

Big Numbers

100th Day of Bug School
Lisa McCourt
HarperFestival, 2004

100th Day Worries
Margery Cuyler
Aladdin, 2005

Emily's First 100 Days at School
Rosemary Wells
Hyperion, 2000

From One to One Hundred
Teri Sloat
Puffin, 1995

Hannah's Collections
Marthe Jocelyn
Dutton Juvenile, 2000

How Much Is a Million?
David Schwartz
HarperTrophy, 1993

A Million Fish... More or Less
Patricia McKissack
Random House, 1996

Millions of Cats
Wanda Gag
Putnam, 1996

*Miss Bindergarten Celebrates the
100th Day of Kindergarten*
Joseph Slate
Puffin Books, 2002

One Hundred Is a Family
Pam Munoz Ryan
Hyperion, 1996

Data and Chance

*And to Think I Saw It
on Mulberry Street*
Dr. Seuss
Random House, 1989

Best Vacation Ever
Stuart J. Murphy
HarperTrophy, 1997

Probably Pistachio
Stuart J. Murphy
HarperTrophy, 2001

Clocks and Calendars*Cookie's Week*

Cindy Ward

Putnam Juvenile, 1997

The Grouchy Ladybug

Eric Carle

HarperTrophy, 1996

My Grandmother's Clock

Geraldine McCaughrean

Clarion, 2002

One Lighthouse, One Moon

Anita Lobel

Greenwillow, 2000

Telling Time

Jules Older

Charlesbridge Publishing, 2002

Today Is Monday

Eric Carle

Putnam, 1997

The Very Hungry Caterpillar

Eric Carle

Philomel Books, 1994

What's the Time, Mr. Wolf?

Colin Hawkins

Egmont Books, 2004

Money*26 Letters and 99 Cents*

Tana Hoban

HarperTrophy, 1995

*Alexander, Who Used To Be**Rich Last Sunday*

Judith Viorst

Sagebrush, 1999

Bennie's Pennies

Pat Brisson

Dragonfly, 1995

A Chair for My Mother

Vera Williams

HarperTrophy, 1984

The Great Pet Sale

Mick Inkpen

Orchard Books, 1998

Geometry*Circles, Triangles, and Squares*

Tana Hoban

Moca Store, 1997

Cubes, Cones, Cylinders, & Spheres

Tana Hoban

Greenwillow Books, 2000

Grandfather Tang's Story

Ann Tompert

Crown Publishers, 1990

Icky Bug Shapes

Jerry Pallotta

Scholastic, 2004

Let's Fly a Kite

Stuart J. Murphy

HarperTrophy, 2000

Round Is a Mooncake

Roseanne Thong

Chronicle Books, 2000

The Shape of Things

Dayle Anne Dodds

Candlewick, 1996

Shapes, Shapes, Shapes

Tana Hoban

HarperTrophy, 2003

So Many Circles, So Many Squares

Tana Hoban

Greenwillow Books, 1998

*Spotted Yellow Frogs:
Fold-out Fun with Patterns,
Colors, 3-D Shapes, Animals*
Matthew Van Fleet
Dial, 1998

*The Village of Round and
Square Houses*
Ann Grifalconi
Little, Brown, 1986

Measures and Size

Actual Size
Steve Jenkins
Houghton Mifflin, 2004

Building a House
Byron Barton
HarperTrophy, 1990

How Big Is a Foot?
Rolf Myller
Young Yearling, 1991

How Big Were the Dinosaurs?
Bernard Most
Harcourt Brace, 1994

Inch by Inch
Leo Lioni
HarperTrophy, 1995

Is It Larger? Is It Smaller?
Tana Hoban
HarperTrophy, 1997

Measuring Penny
Loreen Leedy
Henry Holt, 2000

Millions to Measure
David M. Schwartz
HarperCollins, 2003

Ten Beads Tall
Pam Adams
Child's Play International, 1990

Where's My Teddy?
Jez Alborough
Candlewick, 1994

Who Sank the Boat?
Pamela Allen
Paperstar, 1996

Patterns and Functions

Beep Beep, Vroom Vroom!
Stuart J. Murphy
HarperTrophy, 2000

Grandma's Button Box
Linda Williams Aber
Kane Press, 2002

*Lots and Lots of Zebra Stripes:
Patterns in Nature*
Stephen Swinburne
Boyd's Mill Press, 2002

*Market Day: A Story Told with
Folk Art*
Lois Ehlert
Voyager, 2002

Pattern Fish
Trudy Harris
Millbrook Press, 2000