

Preparing for Kindergarten Mathematics



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**COATESVILLE AREA SCHOOL
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<http://everydaymath.uchicago.edu/parents/k/em4/>



Measuring and Comparing

- At the grocery store, choose two apples and hold one in each hand. Which is heavier? Now weigh each on the scale. What did you discover? Which appears larger in size? Is it also the heavier one?
- At the check-out counter or at home line up your cans from shortest to tallest. Arrange the boxes of food from smallest to largest? Give your child a sequence of items to put in order using words such as first, second, third, last. Have a toy car race. Which car is first, second, etc. Sequence the events of a story or the activities of your day.
- Order shoes in the closet by length.
- Fill several containers with various materials such as water, rice, or sand. Which bottle feels the heaviest? Lightest? Which bottle holds more? How can you find out?
- Use a calendar to look at today's date, yesterday's date, and tomorrow's date. Count the number of days until a special event.
- Count down waiting times such as waiting for the bathtub to fill or waiting for someone to get a jacket on. (10, 9, 8, 7 6, 5 4, 3, 2, 1)



Shapes, Patterns and Sorting

- Go on a shape hunt inside or outside looking for circles, triangles, squares, rectangles, and maybe even some ovals, hexagons and octagons for an added challenge. Use position words to describe location such as above, below, next to, beside, under, on top of, etc. Cut out pictures of shapes and create a shape book.
- Try creating some musical patterns and repeat (clap, clap, tap) or movement patterns (step, step, hop, step, step, hop)
- Create a pattern with cereal or toys. Have your child extend the pattern and then create his / her own.
- Look for patterns in books, repeats, or rhymes.
- Sort recycling, silverware, food, laundry, mail, or toys

Playing Games

Play a variety of games that use dice, spinners, or cards. These will give practice with counting, comparing, and reading numbers. Dominoes are also fun to play with. The game "I Spy" is excellent for locating shapes in our world. Commercial games such as Candy Land, Chutes and Ladders, Hi Ho! Cherry-O, Old Maid, Go Fish, Bingo, Crazy Eights, Connect Four, Memory, Tic-Tac-Toe, Checkers, and Don't Spill the Beans are just a few games that support mathematical thinking, reasoning, and skills. Search the Internet for educational math games for more.

Everyday Activities

Integrate Math into Your Natural World

Count, Count, Count . . .

- Count the number of steps to the kitchen or up the stairs.
- Count skips, jumps, or spins. This helps with coordination and counting. Count windows, doors, or cars lined up at a traffic signal.
- Count napkins, forks, spoons, snacks, fruit, vegetable cans, toy cars or dolls, shoes in the closet – anything you have. Lining up the objects will help your child track when counting. Ask how many do you have? How many would you have if we took 1 away? What about if you have two more added to the group? Do you have more or fewer?
- Have your child count as high as possible he/she washes hands.
- Push an empty swing or rocking chair. Count how many times it moves back and forth before it becomes still.
- Make your own quick puzzle with numbers 1 – 10. Have your child put the puzzle together to see the numbers in order.



- Make a mat numbered 1 – 5. Have your child stack blocks or legos to match the number in each section of the mat.



Recognizing Numbers – What numbers do you see?

- Look outside your apartment or house and try to find and say numbers - house numbers, license plate numbers, street numbers, speed limit signs and any other numbers you can find.
- Look inside books for page numbers or count items in the pictures. Look at a deck of cards and look for all the numbers you can find. Find and match the playing cards by number.
- Create a parking lot with numbered spaces. Now “drive” your car to the numbered spot given.
- What numbers are in your address? Your phone number?
- Check out a can or box of food. Look at the labels. What numbers do you see? Are there any numbers on menus or receipts?



Overview of Everyday Math

Everyday Math is based on the research and philosophy that “children build understanding and develop skills as a result of many meaningful and connected learning experiences. Mastery of mathematics concepts and skills comes with repeated exposure and practice, not after just one lesson. This enables children to make new connections and build on the mathematical content they already know while gradually learning more difficult and challenging content.”

“Math content in this program is taught in a repeated fashion, first with informal exposure and then through more formal and directed instruction. This design allows your child to gain a more genuine understanding of mathematical concepts and a more solid foundation in math.”

“How Children Learn Mathematics” *Everyday Math Home Connections*

General Math Concepts in Kindergarten

Counting



Count to 100; count forward and back from any given number

Write numbers

Count objects and identify the number of objects in a set

Compare sets of objects stating which has more or less; compare numbers

Geometry

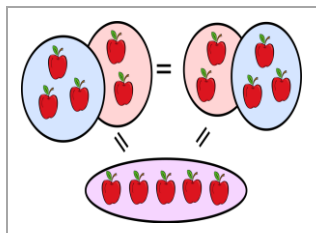


Describe the environment using names of shapes and their position (above, below, etc.)

Identify, analyze and compare two and three-dimensional shapes

Compose shapes from other shapes

Operations & Algebraic Thinking



Understand addition as putting together and adding to; understand subtraction as taking apart or taking from

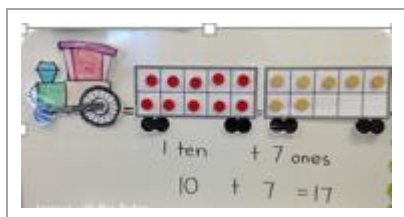
Represent addition and subtraction with objects, fingers, drawings, sounds (claps), and equations

Solve addition and subtraction word problems within 10

Show different ways to make 10

Add and subtract within 5

Numbers & Operations



Gain an understanding of basic place value for numbers 11 – 19. See them as one group of ten and some more.

Measurement & Data



Describe measurable attributes of something (example: length or weight)

Compare 2 objects using measurable words such as more/less, longer/shorter, etc.

Classify objects into categories; sort and describe



Preparing for Kindergarten

“School Readiness is the sum of children’s experiences prior to Kindergarten.” -Department of Education

Even without the guidance of adults, most preschoolers are naturally interested, enthusiastic, and curious about math in the world around them. As your child’s first teacher you have a special job in building a solid foundation critical for his /her future. Just as it is important to talk and read with your child, it is also important to provide children with a variety of experiences with math in mind. They learn best by engaging in hands-on everyday activities where math is integrated and blended into regular life. The next few pages contain some examples of activities that will encourage mathematical thinking and cultivate number sense in your preschooler. Most everyday activities have some math connection if we look for it so have fun as you and your child experience the world with math in mind.



