



Support for Parent and Family Engagement in Student Learning

Mathematics in Everyday Life

Kindergarten through Third Grade

Parents can support their child and become engaged in the learning process when teachers help them understand **1) what** their child is learning, **2) why** they are learning it, and **3) how** they can help their child apply new knowledge and skills to life outside of the classroom. If a teacher also provides families with something called “look-fors,” they can **4) know** more about how their child is learning. Then, when parents and teachers communicate about student learning they will both know what the child did to **5) show** that he learned and can use the new skills.

What
Why
How
Know
Show

Everyday activities like gardening, cooking, housework, shopping, or doing chores outside can provide great opportunities to show children that math is all around them and is a big part of their lives. Here are some ideas to encourage kindergarten – third grade children to think and experience mathematics.

Learning Mathematics in Kindergarten



- Collect and ask your child to count household items such as beans, buttons, pennies, or stones. Sort and classify those objects by size, shape, and color.
- Ask your child to count the number of steps walking from one place to another.
- Say a number and then ask your child to tell you the number before or after the one that you said.
- Use groups of ten items and hide some. Ask your child to count to determine how many you hid.

HOW MANY SHOVELS OF DIRT WILL FILL THE BUCKET?

HOW CAN WE MEASURE THE HOLE TO SEE IF IT IS BIG ENOUGH TO PLANT THE FLOWER?"

- Help your child use a calendar to assist them to learn days and months.
- Ask your child to find objects shaped like circles, rectangles and triangles.



CAN YOU COUNT EACH BEAD WHEN I SAY THE COLOR?

TOUCH EACH BEAD WHEN YOU SAY A NUMBER.

Learning Mathematics in First Grade



- Work with your child toward mathematical fluency by adding and subtracting numbers from 0 to 20.
- Have him or her practice telling you the time of the day when they look at a clock. Ask them to write down times when they start a task and/or when they conclude one.

HOW MANY RED APPLES DO YOU SEE? HOW MANY GREEN ONES? HOW MANY YELLOW APPLES DO YOU SEE?

WHICH GROUP HAS THE MOST APPLES?

- Have them keep a calendar and count to a specific date/event, such as their birthday or a holiday.
- Create a scavenger hunt and have them gather objects and measure them with a ruler and/or tape measure.

- Use Lego blocks or stones to form sets of 10, in order to develop a sense of addition and subtraction in base-10 arithmetic.
- Ask your child to draw freehand mathematical objects such as rectangles, squares, circles, to the best of their ability. If possible, provide rulers, protractors, and compasses to assist them.
- Ask your child to assist you in planning a meal and making a shopping list for the ingredients.
- Have your child count your individual items when you return from the store and unpack the groceries.
- Compare things of different sizes and try to estimate the length in inches or feet and then measure them to verify the accuracy of the measurement.

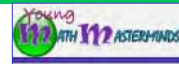
WHICH COOKIE IS THE LARGEST? WHICH ONE IS THE SMALLEST?

IF WE PUT THE COOKIE DOUGH IN THE REFRIDGERATOR BEFORE WE BAKE IT, WHAT HAPPENS TO IT'S SIZE? IF WE LEAVE IT IN THE REFRIDGERATOR LONGER?

WHAT DO YOU EXPECT TO HAPPEN?



Learning Mathematics in Second Grade



- Ask your child to count the change from your purse or wallet.
- Have them use the change to make a specific amount.
- Have them practice counting by 2's, 5's, 10's

LET'S POUR WATER INTO TWO CUPS. WHICH AMOUNT OF LIQUID TAKES UP MORE SPACE?

LOOK AT THE NUMBERS ON THE SIDE OF THE MEASURING CUP. CAN YOU POUR 10 MILLIMETERS OF LIQUID INTO THE CONTAINER?

- Ask your child to solve verbal problems involving addition and subtraction, such as "Start at 7, add 3, get that answer, now subtract 4, get that answer, now add 10, and state your answer."
- Randomly say a number and have your child count down from that number to zero.

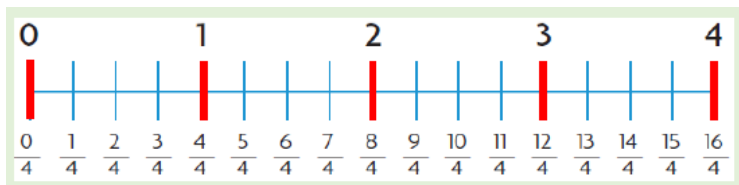
- When you are shopping with your child, have them compare prices and determine how much higher or lower a price is compared to another price.
- Compare the size of two fractions.

BEFORE YOU ATE ONE PIECE OF PIZZA THERE WERE SIX PIECES. NOW THERE ARE FIVE PIECES OF PIZZA. WHAT FRACTIONAL PART OF THE PIZZA REMAINS IN THE PAN?

CAN TWO PEOPLE GET AN EQUAL NUMBER OF SLICES FROM THE FIVE REMAINING PIECES OF PIZZA?



Number Line



- Create a number line like the one pictured here and show your child sometimes fractions are the same as a whole number.

Learning Mathematics in Third Grade



- Play games with your child that have some mathematical calculation involved.
- Practice mathematics number facts of addition, subtraction, division, and multiplication so that they become second nature.

WHAT IS THE BEST STRATEGY FOR YOUR NEXT MOVE?

HOW DO THE OTHER PLAYERS DECISION AFFECT YOUR PLAN?

SHOULD YOU CHANGE YOUR STRATEGY? HOW?

- Ask your child to weigh produce in the grocery store and calculate the price per pound of the food.
- Ask your child to use a scale at home and estimate the weight of items. Ask them to calculate the difference in the weights. Have them compare the weights and hypothesize why one is heavier than the other.
- Ask your child to gather items in sets, such as 10 or a dozen to gain familiarity with the foundations of multiplication. If they only have part of a set, ask them to determine how many items they need to make an entire set.
- Ask your child to mentally compute basic multiplication facts when you are walking, playing or doing chores outside. Have them practice the ones that they are having trouble remembering.

COMPARE TWO CONTAINERS OF DIFFERENT SIZES. ESTIMATE WHICH CONTAINER HOLDS MORE LIQUID. MEASURE THE CONTENTS USING A MEASURING CUP TO TEST YOUR ACCURACY.

IF YOU POUR TWO OUNCES OF LIQUID INTO THE EMPTY CAN, ESTIMATE HOW HIGH IT WOULD FILL THE CAN. PUT A PIECE OF TAPE AT THE SPOT AND TEST YOUR HYPOTHESIS BY MEASURING OUT TWO OUNCES AND POURING IT INTO THE CAN. ARE THE TAPE AND WATER IN THE SAME PLACE? HOW MUCH MORE WATER WILL FILL THE ENTIRE CAN?

