

## Mill Hill School Math 2015

Dear Mill Hill School Mathematicians and Families,

As the end of the school year approaches, we begin to think about all of our summer plans and activities. During the summer, it is also important to keep up with our mathematical thinking skills to be prepared and ready for the next grade. So this summer, we invite you to DO MATH!

Math is done every day in our lives and sometimes without even realizing it! We budget our money, we play board games, do puzzles, play cards, estimate, schedule our lives, plan routes, plant gardens, do home improvement projects, cook and much more.

This summer, we challenge you and your family to think about and do math in meaningful ways. Pay attention to all of the opportunities there are to take advantage of mathematical thinking! Try to do at least 15 minutes of math a day. You might be surprised to discover all the math that you do without even realizing it. Some suggestions for meaningful math activities:

### Primary Suggestions:

- Number a paper from 1-12 for each player. Roll two dice and either add or subtract the numbers on your dice. Cross out that number on your paper. Then let your partner roll. Take turns rolling the dice, and adding and subtracting. The first person with all of the numbers crossed out is the winner.
- Race to \$1.00 Each player needs 10 pennies, 9 dimes, \$1.00 and a die. Take turns rolling the die to collect that many pennies. When you've collected ten pennies, trade them in for a dime. Continue until someone reaches a dollar. Variation: Race to Zero: Play the same way as above but start with a \$1.00, and roll to subtract. The first person to reach zero wins.
- Play Store: Give your child 1 quarter, 3 dimes, 4 nickels, and 9 pennies. Tag a selection of small toys with prices under \$0.84. Take turns counting out the correct coins to buy different items at the store. Ask: Which costs the most? The least?
- Make Pattern Pasta Jewelry: Dye pasta with a little rubbing alcohol and a drop of food coloring and shake in a zip lock gallon bag. Practice counting by twos, fives and tens. Think of different ways to sort the pasta (color, shape, texture). Finally, create a necklace by stringing the pasta in a repeating pattern.
- Practice the facts: play card games like "Double War" where it's just like War but each play throws down two cards and adds them both. The player with the highest sum, gets that hand. If there are equal sums, it's Double War!
- Cook together and focus on measuring, counting, estimating and keeping track of time.
- Sort laundry, silverware, toys, shells on the beach, etc to improve classification skills. Talk about the rules for sorting.
- Tell time using analog clocks.

- Countdown to the first day of school! Use a calendar and count back how many days left until the first day of school.

Intermediate Suggestions:

- For Students Entering Grades 3-6: Fairfield Public Schools Summer Math Packet on the school website: [www.fairfield.k12.ct.us](http://www.fairfield.k12.ct.us)
- How much is your name worth? Assign each letter in the alphabet a monetary value (e.g., a = \$1.00, b = \$2.00 or a = 25¢, b = 50¢, c = 75¢, etc). Whose name is the most expensive in your family? The least expensive?
- Keep a record or log of how many hours you and your family watch television each week. At that rate, figure how much in a month? The summer? Compare this data to how much time you spend running and playing in the fresh air.
- Use store flyers to write the grocery list with a given amount of money.
- Plan schedules using elapsed time. Create a schedule if you go away on vacation- plan the activities for your family and estimate how long each activity will take. Create an expense budget for your family.
- Decide which route to take to a destination relative to time and distance (using a map and not the GPS!).
- Save and budget money.
- Practice your addition, subtraction, multiplication and division facts by playing games like Double War with addition, subtraction and multiplication.
- Tell time using analog clocks
- Do jigsaw puzzles and thinking games like Mastermind and Othello
- Read the newspaper or magazines and find examples of large numbers and numbers represented by percents, decimals or fractions. Make a list of all the numbers you found and put them in order from least to greatest.
- Create a game (board game, dice game, logic game) of your own! Write up the directions and bring it to school to share with your class in September!
- Whenever you see or hear a number, try and think of at least one different way to express it numerically. For example: Your mom tells you that you have **10** minutes before your swim lesson. How many ways can you express the number 10?  $2 \times 5$ ,  $(30 \div 6) \times 2$ , or  $(99 - 90) + 1$