

Congratulations!

By completing *Fifth Grade Everyday Mathematics*, your child has accomplished a great deal. Thank you for your support.

This Family Letter is a resource you can use during the break before sixth grade. It includes a list of Do-Anytime Activities, directions for games that can be played at home, a list of mathematics-related books to read, and a preview of what your child will be learning in *Sixth Grade Everyday Mathematics*. Enjoy your vacation!

Do-Anytime Activities

Mathematics means more when it is rooted in real-life situations. The following activities will help your child connect many of the concepts he or she learned in fifth grade to everyday experiences. We suggest that you do these activities together to help your child build on the skills learned this year and to prepare him or her for *Sixth Grade Everyday Mathematics*.

1. Have your child solve addition, subtraction, multiplication, or division problems that are based on real-life situations. Vary the problems so that some are suitable for mental computation and some require paper-and-pencil calculation. Include problems that involve whole numbers, decimals, fractions, and mixed numbers.
2. Have your child look for patterns in the real world and describe them. For example, your child might notice that when there is more water in a pot, the water will take longer to boil or that when you buy a package that has twice as many batteries as another, the price will not necessarily double. Ask your child to predict whether the patterns he or she has noticed will always hold true and to explain his or her thinking.
3. Ask your child to help you figure out what measurements need to be made to solve a problem or make a decision. For example, if you are buying a new couch, do you need to think about the length, area, or volume of the couch? What decision would each measurement help you make?
4. Have your child identify interesting or surprising numbers in the news, advertisements, or other print or online media. Encourage him or her to consider what numbers represent in different units. For example, if an insurance company advertises a premium of just \$1.50 a day, how much money is that per week? Per month? Per year?
5. Have your child collect data about activities that he or she does regularly. For example, your child could keep track of the number of baskets made in a game of basketball or record the number of pages read in a given amount of time. Talk about the data with your child to see if any patterns or trends emerge.
6. Have your child help with cooking, especially when you want to double or halve a recipe. Ask your child to help you measure the correct amount of ingredients and explain his or her thinking with questions like: *How did you figure out how to double $\frac{3}{4}$? How did you find $\frac{1}{2}$ of $2\frac{1}{4}$?*

Building Skills through Games

This section lists directions for games that can be played at home. The number cards used in some games can be made by writing the numbers 0–20 on index cards.

Decimal Top-It: Addition

Players: 2

Materials: number cards 0–9 (4 of each); 4 counters or coins; paper

1. Shuffle the number cards and place them number-side down on the table.
2. Each player turns over six cards and, using counters or coins as decimal points, forms two numbers with digits in the ones, tenths, and hundredths places. Players may put their cards in any order.
3. Each player finds the sum of his or her numbers. Then players compare the sums. The player with the greater sum takes all the cards.
4. The game ends when there are not enough cards left for each player to have another turn. The player with more cards wins.

Example Round: Tony turns over these cards: 4, 6, 3, 5, 9, 7. He makes the decimals 9.64 and 7.35. Melissa turns over these cards: 7, 4, 1, 0, 7, 8. She makes the decimals 8.41 and 7.70.

Tony's sum is $9.64 + 7.35 = 16.99$. Melissa's sum is $8.41 + 7.70 = 16.11$. Tony takes all the cards because 16.99 is greater than 16.11.

Decimal Top-It: Subtraction

This game is just like *Decimal Top-It: Addition*, except players find the difference between their numbers in Step 3. The player with the greater difference takes all the cards.

Name That Number

Players: 2 or 3

Materials: number cards 0–10 (4 of each); number cards 11–20 (1 of each); paper

1. Shuffle the number cards and deal five cards to each player. Place the remaining cards number-side down on the table between the players. Turn over the top card and place it beside the deck. This is the target number for the round.
2. Players try to match the target number by adding, subtracting, multiplying, or dividing the numbers on as many of their cards as possible. A card may be used only once.
3. Players write their solutions on a sheet of paper, using grouping symbols as needed.
4. When players have written their best solutions, each player sets aside the cards he or she used to match the target number and replaces the cards by drawing new cards from the top of the deck.
5. Place the old target number on the bottom of the deck and turn over a new target number to start a new round.

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6. Play continues until there are not enough cards left to replace all of the players' cards. The player who has set aside the most cards wins the game.

Example Round: Target Number: 16 Laurie's cards: 7, 5, 8, 2, 10

Some possible solutions:

$$10 + 8 - 2 = 16 \text{ (3 cards used)}$$

$$10 + (7 * 2) - 8 = 16 \text{ (4 cards used)}$$

$$\left[\frac{10}{(5 * 2)} \right] + 8 + 7 = 16 \text{ (all 5 cards used)}$$

$$\left[\frac{(8 + 7)}{5} \right] * 2 + 10 = 16 \text{ (all 5 cards used)}$$

Laurie chooses to use the solution $\left[\frac{10}{(5 * 2)} \right] + 8 + 7 = 16$. She sets all five of her cards aside and picks five more cards for the next round.

Top-It: Multiplication or Division

Players: 2 to 4

Materials: number cards 0–9 (4 of each); paper

1. Shuffle the number cards and place them number-side down on the table.
2. Each player turns over four cards.
 - *Multiplication version:* Choose three cards to form a 3-digit number, then multiply by the remaining number. Players may put their cards in any order.
 - *Division version:* Choose three cards to form a 3-digit number, then divide the 3-digit number by the remaining number. Ignore the remainder. Players may put their cards in any order.
3. Compare products (multiplication version) or quotients (division version). The player with the greatest product or quotient takes all the cards.
4. The game ends when there are not enough cards left for each player to have another turn. The player with the most cards wins.

Variation: Use the four cards to make two 2-digit numbers to multiply in Step 2.

Example Round: Ursula turns over these cards: 4, 6, 2, 5. She makes the problem $462 * 5$. Aiden turns over these cards: 3, 7, 8, 1. He makes the problem $731 * 8$.

Ursula's product is 2,310. Aiden's product is 5,848. Aiden takes all the cards because 5,848 is greater than 2,310.

Vacation Reading with a Mathematical Twist

Books can contribute to children's learning by presenting mathematics in a combination of real-world and imaginary contexts. The titles below are organized by mathematical topics. Consider reading these mathematical books with your child.

<p>Number and Operations</p> <p><i>The Rajah's Rice: A Mathematical Folktale from India</i> by David Barry</p> <p><i>Counting on Frank</i> by Rod Clement</p> <p><i>Sideways Arithmetic from Wayside School</i> by Louis Sachar</p> <p><i>The Great Number Rumble: A Story of Math in Surprising Places</i> by Cora Lee and Gillian O'Reilly</p> <p>Fractions</p> <p><i>The Wishing Club: A Story About Fractions</i> by Donna Jo Napoli</p> <p><i>If You Hopped Like a Frog</i> by David M. Schwartz</p>	<p>Geometry</p> <p><i>The Boy Who Reversed Himself</i> by William Sleator</p> <p><i>Finding the Treasure: Coordinate Grids</i> by Renata Brunner-Jass and David T. Hughes</p> <p><i>The Great Polygon Caper</i> by Karen Ferrell</p> <p>Measurement</p> <p><i>Mr. Archimedes' Bath</i> by Pamela Allen</p> <p><i>Measuring Penny</i> by Loreen Leedy</p> <p><i>Perimeter, Area, and Volume: A Monster Book of Dimensions</i> by David A. Adler</p>
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Looking Ahead: Sixth Grade Everyday Mathematics

Next year, your child will...

- continue to explore methods for dividing whole numbers and adding, subtracting, multiplying, and dividing decimals.
- maintain and extend skills for computing with fractions.
- explore rates, ratios, and proportions.
- extend his or her understanding of the number system, number lines, and coordinate grids to include negative numbers.
- extend work with exponents to bases other than 10.
- use variables, expressions, and equations to model and solve real-world and mathematical problems.
- find areas of triangles and parallelograms, surface areas of 3-dimensional objects, and volumes of prisms with fractional edge lengths.
- continue collecting and displaying data on line plots, extend exploration of data displays to include histograms and box plots, and describe data sets using measures of center and spread.