

# Summer Math Learning Packet

## Students Entering Grade 2

Discover mathematics all around you this summer!!! Just as with reading, regular practice over the summer with problem solving, computation, and math facts will maintain and strengthen the mathematical gains you made over the school year.

Attached to this letter, you will find creative mathematics activities to explore at home. The goal is for you to have fun thinking and working collaboratively to communicate mathematical ideas. While you are working, ask how the solution was found and why a particular strategy was chosen.

The Summer Math Learning Packet consists of 2 calendar pages, one for July and one for August, as well as directions for math games to be played at home. Literature and websites are also recommended to explore mathematics in new ways. We encourage you to complete at least 15 math days each month. Keep track of your math in a journal.

| Fun math books to read                                                                                                                                                                                   | Fun websites to explore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <u>Alexander, Who used to Rich Last Sunday</u> by Judith Viorst<br><u>100 days of School</u> by Trudy Harris<br><u>The Button Box</u> by Margartette S. Reid<br><u>The Doorbell Rang</u> by Pat Hutchins | <a href="http://www.funbrain.com">www.funbrain.com</a><br><a href="http://www.aplusmath.com">www.aplusmath.com</a><br><a href="http://www.pbskids.org">www.pbskids.org</a><br><a href="https://illuminations.nctm.org/">https://illuminations.nctm.org/</a><br><a href="http://www.setgame.com">www.setgame.com</a><br><a href="#">Investigations Math Games</a><br><a href="#">Investigations Math Words and Ideas</a><br><a href="#">Math At Home- The Learning Center</a><br><a href="#">Math Playground</a><br><a href="#">Virtual Manipulatives</a><br><a href="#">More Virtual Manipulatives</a><br><a href="#">Which one does not Belong</a> |

# Grade 1 Learning Goals

\*In grade one, students work with whole numbers and place value— including grouping numbers into tens and ones as they learn to add and subtract up through 20. Students also use charts, tables, and diagrams to solve problems. Activities in these areas include:

- Quickly and accurately adding numbers together that total up to 10 or less and subtracting from numbers up through 10
- Understanding the rules of addition and subtraction (for example,  $5+2=2+5$ )
- Solving word problems that involve adding or subtracting numbers up through 20
- Understanding what the different digits mean in two-digit numbers (place value)
- Comparing two-digit numbers using the symbols  $>$  (more than),  $=$  (equal to), and  $<$  (less than)
- Understanding the meaning of the equal sign ( $=$ ) and determining if statements involving addition and subtraction are true or false (for example, which of the following statements are true?  $3+3=6$ ,  $4+1=5+2$ )
- Adding one- and two-digit numbers together
- Measuring the lengths of objects using a shorter object as a unit of length
- Putting objects in order from longest to shortest or shortest to longest
- Organizing objects into categories and comparing the number of objects in different categories
- Dividing circles and rectangles into halves and quarters

## Looking Ahead to Second Grade

\*In grade two, students will extend their understanding of place value to the hundreds place. They will use this place value understanding to solve word problems, including those involving length and other units of measure. Students will continue to work on their addition and subtraction skills, quickly and accurately adding and subtracting numbers up through 20 and also working with numbers up through 100. They will also build a foundation for understanding fractions by working with shapes and geometry. Activities in these areas will include:

- Quickly and accurately adding numbers together that total up to 20 or less or subtracting from numbers up through 20
- Solving one- or two-step word problems by adding or subtracting numbers up through 100
- Understanding what the different digits mean in a three-digit number
- Adding and subtracting three digit numbers
- Measuring lengths of objects in standard units such as inches and centimeters
- Solving addition and subtraction word problems involving length
- Solving problems involving money
- Breaking up a rectangle into same-size squares
- Dividing circles and rectangles into halves, thirds, or fourths
- Solving addition, subtraction, and comparison word problems using information presented in a bar graph
- Writing equations to represent addition of equal numbers

\*Adapted from *Parent Roadmaps* by Council for Great City Schools

### Math Tools You'll Need:

Notebook for math  
journal  
Pencil  
Chalk  
Regular deck of playing  
cards  
Coins  
Dice

## Summer Math Ideas

**DIRECTIONS:** Do your best to complete as many of these summer math activities as you can! Record your work in your math journal every day.

### Games To Play (You will need a deck of cards)

#### **Compare**

Remove the face cards from a deck of cards. Remember an Ace is the same as 1. Pass out all cards in the deck among all the players. Each player flips over two cards at the same time and finds the sum. The one with the larger sum takes the cards. If the sums are the same, turn over 2 more cards. The player with the largest sum keeps all four cards.

#### **Tens Go Fish**

Remove the face cards from a deck of cards. Deal 5 cards to each player. Each player looks for cards that make 10, and they draw new cards from the deck to replace them. Players take turns asking each other for a card that will make 10 with a card from their hand. A player's turn is over when no more pairs can be made. The game is over when there are no more cards. Both players record their combinations of 10.

**Other games to play:** Checkers, Othello, Memory, Set, jigsaw puzzles, Parcheesi, Crazy Eights, Connect Four, Legos, etc.

# July 2024 Entering Second Grade Mathematics Calendar

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| <p>Day 1</p> <p>100 is the answer, what could the question possibly be? Challenge yourself to think of more questions.</p>                       | <p>Day 2</p> <p>Sit outside and use tally marks to record how many birds you see in ten minutes.</p>                                                    | <p>Day 3</p> <p>Take 7 pennies. Put some in 1 hand and some in the other hand. Show 1 hand and have an adult figure out how many are hiding. Switch.</p> | <p>Day 4</p> <p>Read <u><i>100 Days of School</i></u> by Trudy Harris.</p> <p>Find 5 different ways to reach 100. Record each way.</p>                       | <p>Day 5</p> <p>Play <u><i>Tens Go Fish</i></u> (see directions)</p> <p>Add up all the pairs. Who has more? How many more?</p>                  |
| <p>Day 6</p> <p>Go on a Shape Hunt around your home. Look for items shaped like a square, rectangle, and a circle. Draw and label the items.</p> | <p>Day 7</p> <p>Estimate the number of measuring cups it will take to fill a pitcher. Test it out!</p>                                                  | <p>Day 8</p> <p>Play <u><i>Close to 20</i></u>. How does this help you practice your addition?</p>                                                       | <p>Day 9</p> <p>Roll two dice and practice addition and subtraction by adding or subtracting the two numbers.</p>                                            | <p>Day 10</p> <p>How many ways can you make 25 cents using pennies, nickels, dimes, and quarters?</p>                                           |
| <p>Day 11</p> <p>Count backwards by 100s. Begin with 900 and go back to 100. Record</p>                                                          | <p>Day 12</p> <p>Gather a handful of coins with a value less than \$2.00. Calculate the total.</p>                                                      | <p>Day 13</p> <p>Jump rope and count by tens to 100. Try counting backwards.</p>                                                                         | <p>Day 14</p> <p>Read <u><i>The Button Box</i></u> by Margarette Reid. Find a collection at home and sort it. Ask a friend to figure out how you sorted.</p> | <p>Day 15</p> <p>Play a strategy game like <b>Mancala</b> or <b>Connect Four</b>. Would you use the same strategy the next time you play?</p>   |
| <p>Day 16</p> <p>A packet of gum has 5 pieces in it. How many pieces of gum in 3 packets? 5 packets? 7 packets? 10 packets? Record.</p>          | <p>Day 17</p> <p>Make a paper airplane. While you're making it, look at what shapes the folds make in sheet of paper. See how far you can throw it!</p> | <p>Day 18</p> <p>Today's number is 12<br/>Make 12 by:<br/>-Adding two numbers<br/>-Subtracting two numbers<br/>-Adding three numbers</p>                 | <p>Day 19</p> <p>Tell the time that you go to bed to the closest hour or half hour. Draw a picture of the clock's hands for that hour.</p>                   | <p>Day 20</p> <p>Blow a marble, a bottle cap, and a pencil across the table. Measure how far they go. Which goes the farthest? By how much?</p> |
| <p>Day 21</p> <p>Play <u><i>Color Patterns</i></u> on the website <a href="http://www.illuminations.nctm.org">www.illuminations.nctm.org</a></p> | <p>Day 22</p> <p>Play <u><i>Double Compare</i></u> (see directions)</p>                                                                                 | <p>Day 23</p> <p>How many times can you dribble a basketball in 1 minute? 2 minutes? Can you beat your first time?</p>                                   | <p>Day 24</p> <p>Hold an ice cube in your hand. Count by 2's until it melts. Did you count to more or less than 100?</p>                                     | <p>Day 25</p> <p>Using a ruler, find 5 things longer than 12 inches and 5 things shorter than 12 inches.</p>                                    |

# August 2024 Entering Second Grade Mathematics Calendar

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| <p>Day 1</p> <p>Ask 5 people their phone numbers. Add the digits of each phone number together. Who's phone number has the highest value?</p>                | <p>Day 2</p> <p>Visit the website <a href="http://www.funbrain.com">www.funbrain.com</a> and do some math. Record what you did.</p>                | <p>Day 3</p> <p>Read <u><i>Super Sand Castle Saturday</i></u> by Stuart Murphy. Make a sand castle and describe the 3-D shapes.</p>  | <p>Day 4</p> <p>Make a calendar for this week. Record the temperature each day. At the end of the week, compare your weather with the weather of another state.</p>    | <p>Day 5</p> <p>Go to the park and draw the shapes you see. Do you see more rectangles than triangles?</p>                              |
| <p>Day 6</p> <p>Read <u><i>The Doorbell Rang</i></u> by Pat Hutchins. Make cookies with your family! Can you share them equally? How many are left over?</p> | <p>Day 7</p> <p>Play a strategy game like <b>Checkers</b> or <b>Connect Four</b>. Would you use the same strategy the next time you play?</p>      | <p>Day 8</p> <p>In one blow, how many bubbles can you make? What are the most bubbles you can blow at one time?</p>                  | <p>Day 9</p> <p>A ball is symmetrical as you can cut it in half and it will be the same on both sides. Find 5 things in your house that are symmetrical.</p>           | <p>Day 10</p> <p>Estimate how long it will take you to read 10 pages. Try it!</p>                                                       |
| <p>Day 11</p> <p>Play <u><b>Tens Go Fish</b></u> (see directions) Add up all the pairs. Who has more? How many more?</p>                                     | <p>Day 12</p> <p>Grab a handful of an item; cereal, beans, etc. Estimate how many pieces you grabbed. Now count them. Was your estimate close?</p> | <p>Day 13</p> <p>Go for a walk in your neighborhood and look for odd and even numbers.</p>                                           | <p>Day 14</p> <p>Visit the website <a href="http://www.aplusmath.com">www.aplusmath.com</a> and do some math. Record what you did.</p>                                 | <p>day 15</p> <p>100 is the answer. What could the question possibly be? Challenge yourself to think of more questions.</p>             |
| <p>Day 16</p> <p>Ask 10 people their favorite kind of pizza. Record your data in a table, chart, or graph.</p>                                               | <p>Day 17</p> <p>6+6<br/>7+7<br/>8+8<br/>9+9<br/>10+10</p>                                                                                         | <p>Day 18</p> <p>Make a 3-D shape using mini-marshmallows and toothpicks. How many corners does your shape have? How many edges?</p> | <p>Day 19</p> <p>Find a piece of paper. How many times can you fold it in half? Once you're done, unfold the paper all the way and see what shapes the folds make!</p> | <p>Day 20</p> <p><b>YOU DID IT!</b> Make a list of at least three of your favorite activities to share on your first day of school.</p> |