

Summer Math Calendar Entering First Grade Public Schools of Brookline



Get ready to discover math all around you this summer! Just as students benefit from reading throughout the summer, it would also benefit them to engage in math activities. Research shows that students better maintain and strengthen their math skills through regular and meaningful practices. The Math Specialists of Brookline have created this summer math calendar to provide your child and your family with a variety of math activities to explore this summer.

Inside, you will find creative mathematics activities to try at home. The goal is for your child to have fun thinking and working collaboratively to communicate mathematical ideas. The activities reflect a range of difficulty with the intent that your child can choose the activities that are at a “just right” level. While working on these activities, ask your child **how** he found a solution or **why** she chose a particular strategy.

This packet consists of 2 calendar pages (July and August) and an alternate summer math calendar that allows you to fill in your own activities. Each month’s activities are organized into 28 “math boxes.” You can choose which activities you and your child would like to complete on whichever day you want. We encourage your child to complete 20 boxes per month, coloring in each box as it is done. We recommend that you integrate an average of 15-20 minutes of math activities into your child’s day, by completing these activities and reviewing basic facts. Return the signed calendars to your child’s new teacher in September.

We hope that you enjoy the activities, extend them, create new ones, and **have fun!**

Public Schools of Brookline
K-8 Mathematics Department
Revised Spring 2016

Suggested Resources



Ways to Practice Math Facts (using dice, index cards, deck of cards):

- ✓ Choose addition and subtraction math activities on websites (see list of websites)
- ✓ Addition and subtraction flashcards—identify a few facts to work on each time
- ✓ Addition and subtraction triangle flashcards
- ✓ Roll 2 dice and add or subtract
- ✓ Flip 2 cards and add or subtract



Games:

Turn Over Ten (or 6)*
Race to the Top*
Collect 20¢*

**Directions included*

Additional Games:

Uno, Blink, Dominoes, Mancala, Rat-a-tat Cat



Books:

<i>Ten Black Dots</i>	Donald Crews
<i>The Greedy Triangle</i>	Marilyn Burns
<i>Inch by Inch</i>	Leo Leonni
<i>Two Ways to Count to Ten</i>	Ruby Dee
<i>Betcha</i>	Stuart Murphy



Websites:

<http://illuminations.nctm.org> (Bobbie Bear, Five Frame, Ten Frame, Concentration)
<http://www.oswego.org/ocsd-web/games/mathmagician/mathsadd.html>
<http://www.oswego.org/ocsd-web/games/mathmagician/mathssub.html>
<https://www.xtramath.org/> (personalized program for fact practice)
<http://www.aplusmath.com/Games/PlanetBlasterBasics/index.html> (Planet Blaster)
<http://www.factmonster.com/math/flashcards.html> (Flashcards)
<http://nlvm.usu.edu>

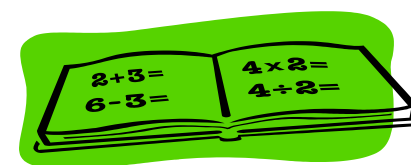
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sort the laundry (by owner, by color, by size, or by item type). Who in your family has the most pairs of socks in this load?	Draw a picture using 2 circles, 3 triangles, and 1 rectangle. Count the # of sides and the # of corners in your picture.	Play Five Frame: http://illuminations.nctm.org 	Take a handful of coins; count the number of pennies, nickels, dimes and quarters. How many of each do you have?	Play Turn Over 10 (or 6).  Write down all the possible combinations that equal 10 (or 6).	Read a math book. 	Make a chart of the weather this week. How many sunny days? Rainy days? Cloudy days? How many more sunny days than rainy days?
Roll 2 dice. Add the 2 numbers together and write a number sentence. Play this 10 times.	Play Compare. 	Help set the table for a meal. How many people are there? How many forks, spoons, and knives do you need? Count all the utensils by 2s.	Count 100 objects (example: Cheerios, raisins, rocks). How many ways can you group your objects? (By 2s, 5s, and 10s...)	Read a math book. 	Look in your kitchen. Find 5 boxes of different sizes in your kitchen. Line them up from tallest to shortest. Now line them up from thickest to thinnest.	Take a walk outside. Record how many insects, birds, and mammals you see. What did you see the most of? Try using tally marks to keep track.
Read a math book. 	Take 5 coins. What is the total value of the coins you have? Do this 5 times.	Practice your math facts. 	Play Collect 20¢. 	Write your last name. If A=1, B=2, C=3, etc...What is your last name worth?	Play Race to the Top. 	Time your transitions by counting backwards. "I will finish putting my shoes on in 20 seconds. 20, 19, 18..."
Practice your math facts. 	Practice counting on from numbers other than one. Start at 4, start at 17, or start at 32. Now try counting backwards.	Read a math book. 	Make a list of all the fruits you have. Sort them by color. Make a graph to show your sorting.	Count how many steps it takes you to get from your room to the kitchen. Try giant steps. How many more regular steps did it take?	Play Five Frame: http://illuminations.nctm.org 	Roll 2 dice. Add the 2 numbers together and write a number sentence. Play this 10 times.

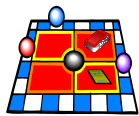
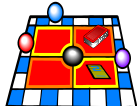
Did you know?

The smallest known monkey is the pygmy marmoset. These tiny Amazon rainforest animals measure only about 5 inches long. Is this bigger or smaller than your hand?

Child's Name: _____

Parent's Signature: _____



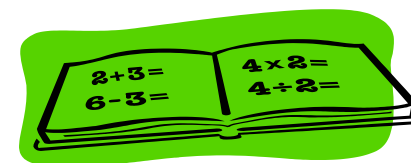
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Jump 3 times: once like a bunny, once like a frog, and once like a child. Measure each jump. Which jump was the shortest? Longest?	Read a math book. 	Play Compare. 	Make a picture using 1 circle, 2 triangles, and a shape with 4 sides. Does your picture have a vertical/horizontal line of symmetry?	Play Turn Over 10 (or 6).  Write down all the possible combinations that equal 10 (or 6).	Write your first name. If A=1, B=2, C=3, etc...What is your first name worth?	As you walk or drive in the car, try to find all the numbers 0, 1, 2, 3...in order. How many do you see along the way? How high can you go?
Practice your math facts. 	Play Double Compare. 	In Olympic gymnastics, men compete in 6 events and women compete in 4 events. Who competes in the most events?	Try a game like basketball, bowling, or mini golf. Help keep score. Who had the most points? Is that person the winner?	Play Bobbie Bear: http://illuminations.nctm.org 	When you go out, count how many people are wearing shorts versus long pants and compare. Why might that change on another day?	Read a math book. 
Tell a friend a story problem to go with $3+2$. Then try a story to go with $5-2$.	Play Ten Frame: http://illuminations.nctm.org 	The U.S. soccer team needs to add 6 more players. They have already chosen 3. How many more players will they need to total 6?	Read a math book. 	Look at a calendar. How many days are left until school begins? How many weeks?	Practice counting on from numbers other than one. Start at 6, start at 13, or start at 43. Now try counting backwards.	Make a list of all the 2D and 3D shapes you can think of. Go on a scavenger hunt looking for those shapes. Check off the shapes you find.
With chalk, make a repeating pattern design on a sidewalk or driveway near you. Can you label your pattern? (ex: ABAB, AABAAB...)	Play Turn Over 10 (or 6). Write down all the possible combinations that equal 10 (or 6). 	Practice your math facts. 	Play Race to the Top. 	Ty runs a mile in 5 minutes. How many miles can he run in 10 minutes?	Read a math book. 	Play Collect 20¢. 

Did you know?

At the 2012 Olympics, Greg Rutherford won the long jump gold medal. His jump measured more than 8 feet long! Measure how far you can jump.

Child's Name: _____

Parent's Signature: _____



DIRECTIONS FOR GAMES TO PLAY WITH FRIENDS OR FAMILY

Compare:

Materials: Deck of Number Cards 0-10 (or playing cards with face cards removed)

Object: Decide which number is largest.

How to Play: Divide all the cards evenly among the players. Each player puts out one card. The player with the largest number takes all the cards.

Variations: •The player with the smallest number gets all the cards.

- The players all keep their own cards but the one with the largest (or smallest) number says “Me”.
- Add wild cards to the deck. The player putting out a wild card can make it any digit (0-9).

Double Compare:

Materials: Deck of Number Cards 0-10 (or playing cards with face cards removed)

Object: Decide which total is greatest.

How to Play: Divide all the cards evenly among the players. Each player puts out **two** cards simultaneously. Each player announces his/her total.

The player with the greatest total takes all the cards.

Variations: •The player with the smallest total gets all the cards.

- The players all keep their own cards but the one with the largest (or smallest) total says “Me”.
- Add wild cards to the deck. The player putting out a wild card can make it any digit (0-9).
- Triple compare: Players each turn over 3 cards on a turn and add all 3 to find the total.

Collect 20¢:

Materials: Coins (pennies, nickels dimes), one die.

Object: Add on to your coin totals until you get to the decided amount.

How to Play: Decide on an amount of money to collect (15¢, 20¢, 25¢, 50¢). Players take turns rolling the die. The player announces the number rolled and takes that number of pennies. The next player rolls and adds his/her pennies to the collection. You can trade in pennies for nickels or dimes as you go along. The game is over when the collection equals the decided amount.

Turn Over 10

(This game is a variation of Memory or Concentration)

Materials: Deck of Number Cards 0-10 (or playing cards with face cards removed)

Object: Find as many combinations of two cards that equal 10.

How to Play: Place all the cards face down on a table in a rectangular arrangement (an array). Players take turns turning over two cards. If the two cards add together to make 10, the player keeps the pair. If the cards do not make 10, the player turns them back over. The game ends when all possible combinations have been taken.

Variations: •Turn Over 6 – Use only 0-6 cards and turn over pairs of cards that total 6.

- Use more than 2 cards to get to 10. If the first two cards turned over equal a number smaller than 10, the player continues to turn over cards until s/he reaches 10 or goes over. Note: This variation usually results in cards left behind which do not make combinations to 10.

Name: _____

Race to the Top

Directions:

Roll two (1-6) dice. Add the numbers to find the sum. Color in a box in the column above the sum. Continue rolling the dice and coloring in a box above the sum until a sum reaches the FINISH LINE at the top. The sum that reaches the top first is the winner.

Variations:

You can play this alone or play with a partner on the same game board. Take turns rolling the dice and coloring in a box above the sum. Game is over when a sum reaches the finish line. Winner is the person who colors in the box that touches the Finish Line.

Before playing, make a prediction:

Which number do you think may be the winner? _____

FINISH LINE										
2	3	4	5	6	7	8	9	10	11	12

Which number was the winner? _____

What combinations can you roll to get the winning number? _____

Alternate Summer Math Calendar

Entering Grade _____

If you would prefer to substitute your own math activities for those suggested in the enclosed calendars, please document your created activities below. Remember: the goal is to complete 20 activities each month, so you may need to print this sheet twice!

<u>Activity #</u>	<u>Date Completed</u>	<u>Description of Math Activity</u>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Student's Name: _____ Parent Signature: _____

Looking for apps for math practice?

Here are a few free math apps to check out!

(List begins with the earliest concepts)

Line 'Em Up – *order/compare numbers on a number line*

MathTappers: Find Sums

MathTappers: Number Line

Number Concentration (National Council of Teachers of Mathematics)

Learning Center: Geoboard

Deep Sea Duel (National Council of Teachers of Mathematics) – *thinking about operations*

Door24 – Math – *thinking about operations*

LobsterDiver HD - *fractions on a number line*

MathTappers: Multiples

Pick-a-Path (National Council of Teachers of Mathematics) – *thinking about operations*

SolveMe Mobiles (EDC) – *algebraic thinking*

MathTappers: Estimate Fractions