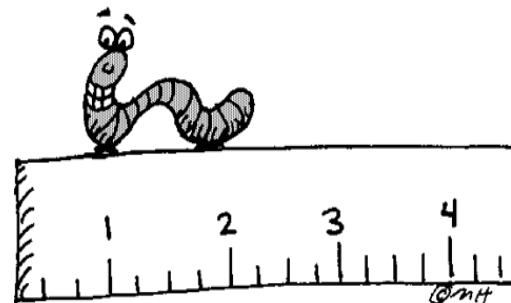# Summer Math Calendar
First Grade
Brookline

Get ready to discover math all around you this summer! Just as teachers encourage students to continue reading throughout the summer to solidify and retain reading skills, we feel the same attention should be given to mathematics. Regular practice over the summer with problem solving, computation, and math facts will maintain and strengthen math gains made over the school year. 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'll find creative activities that include measuring and counting everyday objects, math games, riddles, basic facts practice, math web sites and math literature books (available through Brookline's public libraries). The goal is for your child to have fun thinking and working collaboratively with you while communicating his/her mathematical ideas. While you are working on these activities, ask your child **how** he found that solution or **why** she chose that strategy. These activities help reinforce the concepts/skills your child learned this past year so that s/he can retain them over the summer.

This packet consists of 2 calendar pages, one for July and one for August, an alternate summer math calendar as well as directions for math games to be played at home. (Note: a substitute for numeral cards can be a regular deck of cards without the face cards or Uno cards.) Each month's activities are organized into 28 "math boxes." ***You can choose which activities you'd like to complete on which day***. We encourage your child to complete 20 math boxes each month. After completing a box, color it in. In September return the calendar, with your signature, to your child's new teacher.

We recommend that you integrate an average of 15-20 minutes of math activities into your child's day, including completing the enclosed activities *and* practicing counting. Counting can be taught and reinforced through repeated use in games, real-life problems, songs, rhymes and cards. Have your child count backwards from 10. Practice estimating and counting 20+ objects. Skip count by 5s and 10s by organizing objects into groups to find the total. Think of regular and convenient times to practice counting, such as waiting in line, driving in a car, riding the train, walking down the street, brushing teeth, reading time, etc.

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

We welcome your feedback on the calendar (tara_washburn@brookline.k12.ma.us).
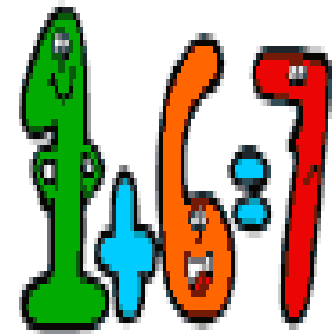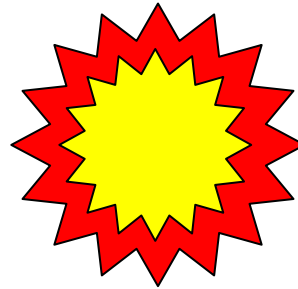
Summer Math
First Grade
Brookline

Directions: Complete **any 20** math boxes each month. Color in the box after your complete it. Return the calendar grid to your new first grade teacher in September.

BOOKS TO READ THIS SUMMER

▼Benny's Pennies by Pat Brisson
▼Pattern Fish: by Trudy Harris
•Inch by Inch: by Leo Leonni
▼Ten Flashing Fireflies by Philemon Sturges
•Two Ways to Count to Ten by Ruby Dee

● Book is available through Brookline's public libraries.

▼Book is available through the Minuteman library network.

GAMES TO PLAY WITH FRIENDS OR FAMILY

Compare or Double Compare*
Collect 20¢*
Turn Over 10 (or 6)*
*Directions for above games are included

The games below are available at stores
Uno
Monopoly Junior
Mancala
Blink
Dominoes
Toot & Otto
Batik

ATTACH YOUR MATH CALENDAR BELOW

Brookline's First Grade Calendar - July

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Sort the laundry (by owner, by color, by size, by item type) Who in your family had the most socks in this load?	Make a picture using 2 circles, 3 triangles, and some rectangles. Explain to a friend how you made it.	Play the same game again with a friend. Did you use a strategy? Tell someone about it.	Play the same game again with a friend. Did you use a strategy? Tell someone about it.	Swing 50 times or jump 50 times. How long did it take? Can you count backwards?	Read ▼Benny's Pennies by Pat Brisson. What would (or could) you do with your pennies if you had some?	Keep track of the weather this week. How many sunny days? Rainy days? Cloudy days? How many more sunny days than rainy days?
Play the game **Turn Over 10** (or 6). Practice skip counting by 2s to 40 (2, 4, 6, …)	Play **Turn Over 10** (or 6) again. This time write down all the possible combinations that equal 10 (or 6).	Help set the table for a meal. How many people are there? How many forks, spoons, and knives do you need?	Count 25 objects (Cheerios? raisins? rocks?) Now make a pile of 15 from that 25. How many are still left?	Read ● Inch by Inch by Leo Leonni. What part of your body can you use to measure?	Look in your food storage. Find 5 boxes of different sizes in your kitchen (cereal? pasta?). Line them up from tallest to shortest. Now, line them up from thickest to thinnest.	Take a walk outside. Survey on paper how many insects, birds, and mammals you see.
Read ▼Pattern Fish by Trudy Harris Draw, build or sing your own pattern.	Make a repeating pattern with seeds (or flowers on a piece of masking tape (sticky side up). Put the sticky ends together to make a bracelet.	Play *Concentration* on the web♦ with *numbers 1-10*. Record your matches. ♦ illuminations.nctm.org Click on ACTIVITIES. K-2. Search.	Play a number game with a friend. Practice your +2 facts 1+2, 2+2, 3+2, 4+2… Do you count on?	Play the same number game again. This time record the numbers (or number combinations).	Bring many sizes of containers to a sand or dirt place. Fill them up and compare their weights and the castles they make. Which is highest?	Time your transitions by counting backwards. "I will finish putting my shoes on in 20 seconds. 20,19,18…"
Build something with blocks or Lego's. Decide how many you will use. Tell someone about the shapes you have made.	Practice counting on from numbers other than one. Start at 4… Start at 17… Start at 32… Can you count backward?	Read a book of your choice. What math ideas do you find in it?	Go to a store or market with an adult. Make a list of all the fruits you would eat. Sort them by color. Make a graph to show your sorting.	Count how many steps it takes to get from your room to the kitchen. Then try giant steps. How many more regular steps did it take?	Play *Five Frame* on the web. ♦ Games: *Fill a Frame* Record all the number sentences with a sum of five. ♦ illuminations.nctm.org Click on ACTIVITIES. K-2. Search.	Play a game that uses dice. Practice your addition facts that equal 6. 2+4, 3+3…Are there more?

PARENT SIGNATURE: _____   CHILD'S NAME: _____

Created by the Math Department, Public Schools of Brookline, 2007

Brookline's First Grade Calendar - August

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?	Play a game with a friend. ←→ Practice counting backwards from big numbers. Start at 27. Try starting at 40.	Play the same game again with a friend. Did you use a strategy? Tell someone about it.	How many utensils do you think you have? Make a picture graph to show how many forks, knives, and spoons you have in your utensil drawer.	Make a picture using 3 circles, 4 triangles, and a shape with more than 4 sides. Can you make it symmetrical?	Write your first and last name. How many letters in each? How many more letters in your long name than in your shorter one?	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?
Play **Compare** with a friend. Practice skip counting by 2s and 5's. 2, 4, 6, 8 to 30. 5, 10, 15, 20...to 50.	Play **Double Compare** with a friend. What is your strategy for comparing the total of two cards?	Start a collection of rocks or shells. Estimate how many fit in your hand? Count to see. Put them in order from smallest to largest.	Try a game like basketball, bowling, or mini golf. Help keep score. Who had the most points? Is that the winner?	Play *Bobbie Bear* on the web. ♦ *Choose: Customize* How many outfits can you make with 2 shirts and 3 pants? ♦ illuminations.nctm.org Click on ACTIVITIES. K-2. Search.	When you go out, count how many people are wearing shorts and long pants and compare. Why might that change on another day?	Read Ten Flashing Fireflies by Philemon Sturges. Instead of fireflies in a jar, count the veggies going into your mouth tonight.
Tell a friend a story problem to go with 3+2. Then try a story to go with 5-2.	Play *Ten Frame* on the web. ♦ Games: *Fill a Frame* Record all the number sentences with a sum of ten. ♦ illuminations.nctm.org Click on ACTIVITIES. K-2. Search.	Play a game with a friend. Try counting by tens forward and backward.	Play the same game again with a friend. ←→ What about the game is mathematical?	Look at a calendar. How many days are left until school begins? How many weeks? Predict how many will be sunny, rainy, snowy or cloudy. Can you find a way to keep track?	Read Two Ways to Count to Ten by Ruby Dee How many ways can you count to ten?	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. Ask an adult first.	Use different shaped containers and wet sand or dirt to build a repeating pattern design. Can you label the pattern? ABAB; AABAAB; ABCABC	Play *Bobbie Bear* on the web♦ again *Choose: Customize* How many outfits can you make with 3 shirts and 3 pants? ♦ illuminations.nctm.org Click on ACTIVITIES. K-2. Search.	Play a board game that uses dice. Practice your facts that equal 6. 5+1, 4+2, 3+3, are there more?	Play a board game that uses dice again. Does any one of the numbers get rolled more than others?	Draw a picture to show this problem: I made 8 hot dogs. The kids ate 4 of them. How many are left? Can you make your own problem picture?	Play the game **Collect 20¢** How many nickels can you use to make 20¢? How many pennies? How many dimes?

PARENT SIGNATURE: _____   CHILD'S NAME: _____

Created by the Math Department, Public Schools of Brookline, 2007

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.

Alternate Summer Math Calendar
for Grade _____

If the activities suggested don't seem to "fit" your child, or if you have your own websites/literature/math practice you'd like to do, you can create-your-own math calendar. Feel free to substitute your own activities in this Alternate Summer Math Calendar or mix-and-match some of the grade-level activities with some other activities that better suit your needs or learning style. All we ask is that you document your created activities below. Remember: the goal is to complete 20 activities each month (so you may need an extra recording sheet).

No.	Date Completed	Description of Math Activity
1		
2		
3		
4		
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8		
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10		
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12		
13		
14		
15		
16		
17		
18		
19		
20		

Child's name: _____ Parent signature: _____

Remember, we welcome your feedback! Send your thoughts/suggestions to: tara_washburn@brookline.k12.ma.us