Summer Math Calendar
Entering Second Grade
Public Schools of Brookline

Get ready to discover math all around you this summer!

Just as students benefit from reading throughout the summer, they also benefit from engaging in regular and meaningful math activities. 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** they found a solution or **why** they chose a particular strategy. We encourage you to approach them with curiosity and creativity.

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

Suggested Resources

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

- ✓ Choose addition and subtraction math activities on websites (see list)
- ✓ 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:

Area Capture* Tens Go Fish*
Close to 20* Counters in a Cup* **Directions included*

Additional Games:

Mancala, Uno, Skipbo, Blink, 1-2-3 Oy!

Books:

Ten Red Apples	Pat Hutchins
Millions to Measure	David Schwartz
Counting on Katherine: How Katherine Johnson Saved Apollo 13	Helaine Becker
Two of Everything	Lily Toy Hong
Grandfather Tang's Story	Ann Tompert
Alexander Who Used to Be Rich Last Sunday	Judith Viorst

Websites:

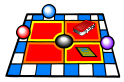
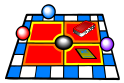
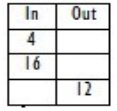
http://illuminations.nctm.org (Concentration, Grouping and Grazing, How Many Under the Shell?, Ten Frame)
http://nlvm.usu.edu
https://gamesforyoungminds.com/blog?category=Free%20Games
http://figurethis.nctm.org
https://www.youcubed.org/resource/youcubed-at-home/
http://bedtimemath.org/category/daily-math/
https://talkingmathwithkids.com/_blog/
http://tinyurl.com/gamesinv3

Public Schools of Brookline

July

Entering Second Grade Math Calendar

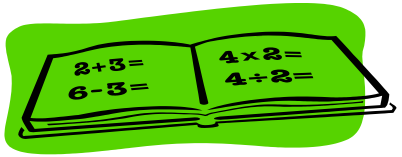
2nd

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Blow a marble, a bottle cap, and a pencil across a table or the floor. Measure how far they go. Which goes the farthest? By how much?	Play Adding 10. Roll a die. Add 10 to the number rolled. Record your number sentence. Repeat 10 times.	Count backwards from 30 to 0. Count backwards by 10's from 80 to 0. Count backwards by 5's from 40 to 0. Repeat using different starting numbers.	Make a quart of lemonade. How many cups of water do you need? How many Tbsps of mix do you need to make it sweet enough? How many if you double it?	Play Area Capture. (see directions) 	Read a math book. 	Play How Many Under My Shell:: http://illuminations.nctm.org  <u>Or</u> Counters in a Cup
How many books are on 1 shelf? First, make an estimate. Then count them by 2's. How close was your estimate?	Get a pile of coins. How many ways can you make 25 cents using pennies, nickels and dimes?	Sort the laundry into categories (by owner, by size, by color or by item type). Make a bar graph for color.	Play Concentration: http://illuminations.nctm.org Use numbers 1-10. Record your matches. 	Skip count by 10's from 16 to 136. Skip count by 5's from 30 to 125. Skip count by 2's from 10 to 50. Repeat using different starting and ending numbers.	Play Close to 20. (see directions) 	Get a pile of coins. Show all the ways to make 15 cents. How do you know you have them all?
Play Ten Frame: http://illuminations.nctm.org 	Estimate how many pieces of cereal are in ¼ cup. Count the pieces. Now estimate how many ¼ cups fit in your cereal bowl. Estimate how many pieces in your bowl.	Practice your math facts. 	Read a math book. 	Play a math game  or DreamBox activity.	How many seconds does the traffic light stay green? Red? How much longer is 1 light than the other?	I have a machine that adds 5 to every number I put in.  If 12 comes out, what did I put in?
Play a math game  or DreamBox activity.	Count by 2's to 50 starting at 12. Count by 10's to 64, starting at 4. What did you notice about the numbers you say? Repeat using different numbers.	Play How Many Under My Shell: http://illuminations.nctm.org 	I'm 7 years old, my sister is 11. Who is younger? By how much? I've 16 stickers, my sister has 9. Who has more? By how many?	Count how many times you can hop on your right foot, then your left. Which foot could you hop on longer? How much longer?	Play Tens Go Fish. (see directions) 	What are all the ways to make 10? Record your number sentences. How do you know you have them all?

Did you know?
In Major League Baseball, the bases are 90 feet away from each other. In Little League, this distance is 60 feet.

Child's Name:_____

Parent's Signature: _____



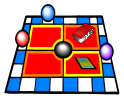
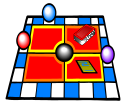
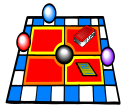
Created by the K-8 Math Department, Public Schools of Brookline, Revised Spring 2021

Public Schools of Brookline

August

Entering Second Grade Math Calendar

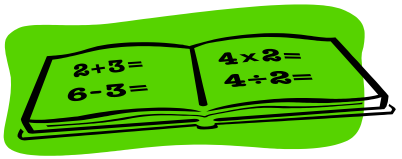
2nd

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Play How Many Under My Shell:: http://illuminations.nctm.org  <u>Or</u> Tens Go Fish (directions included)	Play Tens Go Fish. (see directions) 	Tell an adult an addition story problem to go with 6+5. Now tell a subtraction story for 11-5. Make up other addition and subtraction story problems.	A small pack of gum has 6 pieces. How many pieces of gum are in 3 packs? What about in 5 packs? What if each pack had 7? 8?	Make a 3-D shape using mini marshmallows and toothpicks. How many corners does your shape have? How many edges?	The three numbers in my fact family are 7, 3, and 10. What are the 2 addition and 2 subtraction number sentences you can make using these numbers?	Play Close to 20. (see directions) 
Roll 2 dice together and add to find the sum. Record the sum. Do this 20 times. What sum did you get the most often? Why? Make a graph to show your results.	Play Ten Frame: http://illuminations.nctm.org 	Play Adding 10. Roll a die. Add 10 to the number rolled. Record your number sentence. Repeat 10 times..	Read a math book. 	Make a list of 2-D and 3-D shapes. Go on a scavenger hunt to look for those shapes. Bring your list and check off the shapes you find.	Play a math game  or Dreambox activity.	Listen to the whole story before answering: I had 4 shells. I got 2 more. I got 3 more. I lost 2. How many do I have? Make and solve other problems.
Play a math game  or DreamBox activity.	Create a repeating pattern with shapes, like ##*##*. Ask a friend what the 9th shape would be. The 10th? Have a friend make up a new pattern.	Play Tens Go Fish. (see directions) 	Tell an adult an addition story problem to go with 4+8. Now tell a subtraction story problem for 12-4.	Read a math book. 	Practice your math facts. 	Line up 4 different figures or animals. Record the order. Now change the order. How many different ways can you line up 4 figures?
Read a math book. 	Play a hiding game. Get 7 pennies. Put some in 1 hand and some in the other hand. Show 1 hand, and have the adult figure out what's hiding. Switch roles. Play 10x.	Play Area Capture. (see directions) 	Play Concentration: http://illuminations.nctm.org  Use numbers 1-10. Record your matches by writing the digits with the words or pictures to match	Make a tally chart of the number of fruits and vegeta-bles you ate today at your meals and for snacks. Did you eat 5 servings? Try again tomorrow.	Play How Many Under My Shell: http://illuminations.nctm.org 	Play a math game  or DreamBox activity.

Did you know?
The fastest fish is the sailfish. It can swim up to 68 miles per hour! For more sailfish facts:
kids.nationalgeographic.com

Child's Name:_____

Parent's Signature: _____



Created by the K-8 Math Department, Public Schools of Brookline, Revised Spring 2021

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!

Activity #	Date Completed	Description of Math Activity
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:_____

Close to 20

Materials: Deck of number cards, 0 to 10 (four of each)
Close to 20 score sheet

Players: 2

Object: Add 3 cards together and get as close to 20 as you can.

Note:
**You can make the number cards out of index cards. Or, playing cards can be used, with the Ace being 1, and jokers or some other face card being zero.*
***To play the game more than once, make multiple copies of the recording sheet before using it. Alternately, put the recording sheet in a clear sheet protector, use a dry erase marker, and the sheet can be reused.*

How to Play:

1. Deal 5 cards to each player.
2. Take turns choosing any 3 of your cards to add together, getting as close to 20 as you can.
3. Record your numbers and the total (sum) on the recording sheet.
4. Your score is the difference between your sum and 20. (Example. You choose 9, 5 and 8. Your sum is 22. Your score is the difference between 20 and 22. (22 – 20 = 2)
5. After each round, players return their 3 used cards to the discard pile and take 3 new cards.
6. Play 5 rounds. Find your total score. The player with the ***lowest*** total score is the winner!

Close to 20 Score Sheet

PLAYER 1 SCORE

Round 1: _____ + _____ + _____ = _____ _____

Round 2: _____ + _____ + _____ = _____ _____

Round 3: _____ + _____ + _____ = _____ _____

Round 4: _____ + _____ + _____ = _____ _____

Round 5: _____ + _____ + _____ = _____ _____

TOTAL SCORE: _____

PLAYER 2 SCORE

Round 1: _____ + _____ + _____ = _____ _____

Round 2: _____ + _____ + _____ = _____ _____

Round 3: _____ + _____ + _____ = _____ _____

Round 4: _____ + _____ + _____ = _____ _____

Round 5: _____ + _____ + _____ = _____ _____

TOTAL SCORE: _____

Counters in a Cup

Materials: Counters (5–10)
Counters in a Cup game grid
Paper cup

Players: 2

Object: Figure out how many of a set of counters are hidden.

Note to Families

For counters, you can use buttons, pennies, paper clips, beans, or toothpicks. Hide them under any container that you cannot see through. If you do not have a copy of the game grid, write the numbers in two columns on any paper.

How to Play

1. Decide how many counters to use each time. Write this total number on the game grid.
2. Player A hides a secret number of counters under the cup and leaves the rest out.
3. Player B figures out how many are hidden and says the number. Lift the cup to check.
4. On the game grid, write the number hidden in the cup and the number left out.
5. Players switch roles. Hide a different number of counters. (It's OK to hide the same number of counters more than once in a game.)
6. Repeat steps 2–5 until you have filled the game grid. (Hide the counters eight times.)

Optional

Your filled game grid shows different ways to break the total number into two parts. Can you find a way that is not shown?

Tens Go Fish

You need

- deck of Primary Number Cards (without Wild Cards)
- sheet of paper

Play with a partner.

1. Each player is dealt 5 cards from the Primary Number Card deck.
2. Each player looks for pairs from his or her cards that make 10. Players put down the pairs of cards that make 10, and they draw new cards to replace them from the Primary Number Card deck.
3. Players take turns asking each other for a card that will make 10 with a card in their own hands.

   If a player gets the card, he or she puts the pair down and picks a new card from the deck.

   If a player does not get the card, the player must "Go fish" and pick a new card from the deck.

   If the new card from the deck makes 10 with a card in the player's hand, he or she puts the pair of cards down and takes another card.

   If a player runs out of cards, the player picks two new cards.

   A player's turn is over when no more pairs can be made that make 10.
4. The game is over when there are no more cards.
5. At the end of the game, players record their combinations of 10.

Area Capture

Materials: Game Board
Crayons or Markers (2 different colors)

Players: 2

Object: To capture more space on the Game Board than your opponent.

Note: *To play the game more than once, make multiple copies of the game board before using it. Alternately, the figures on the game board can be cut out and saved. To play, follow the directions below, but do not color or write on the shapes. Players each collect the shape of their choice on their turn, and record the area on a piece of paper.*

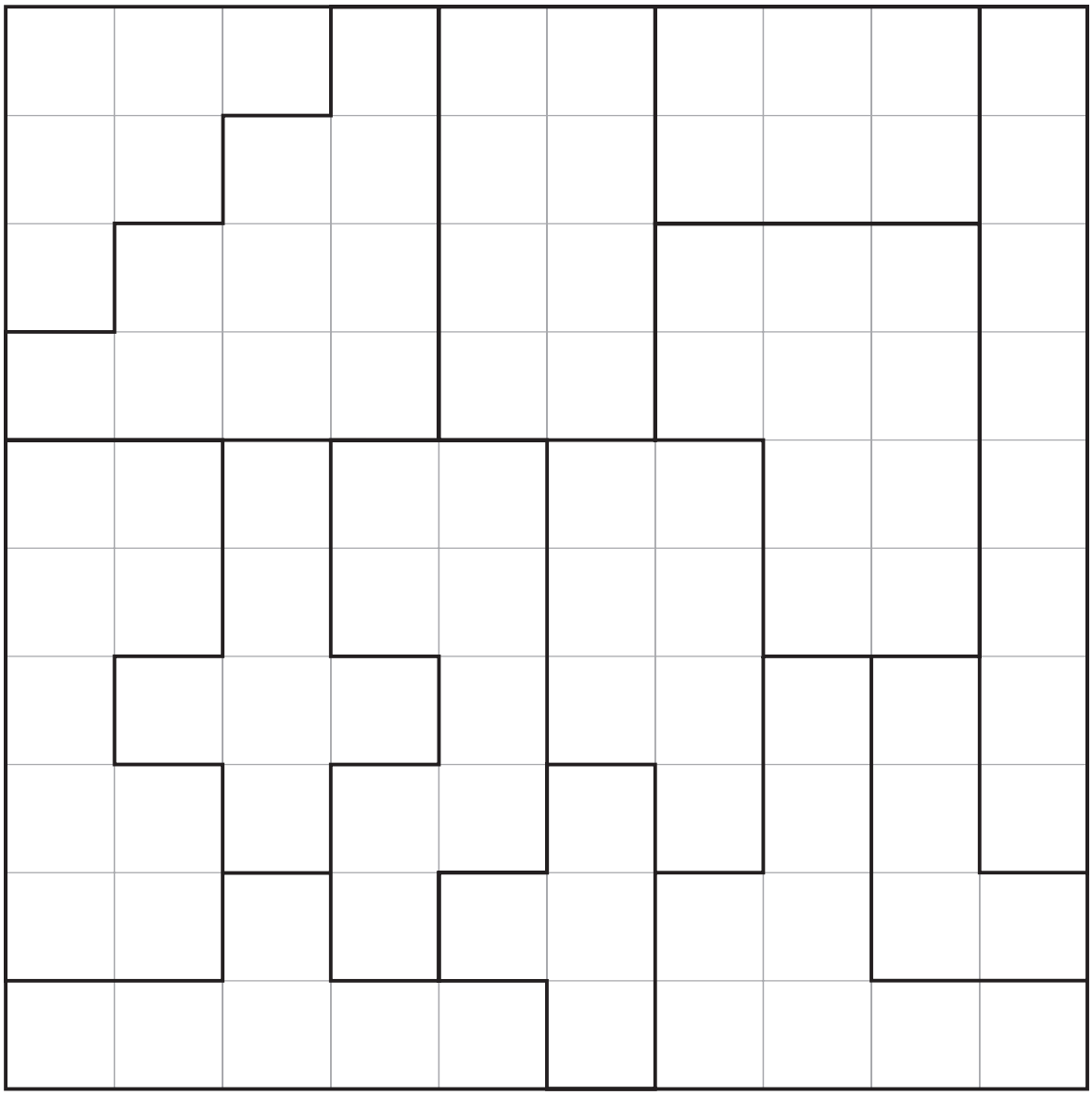
How to Play:

1. Each player chooses one color crayon or marker to use for the game. Players take turns choosing one of the figures on the game board to capture. Figures are captured by coloring in all of the squares of the figure, finding the total number of squares in the shape (area), and writing that number in the shape.
2. After all of the shapes have been captured, each player finds the sum (total) of all of their figures.
3. Players check to make sure the sum of their areas together equals 100, the total number of squares on the game board.
4. The player who captures the largest total area wins the round.

Name _____ Date _____

Activity Master 75

Area Capture Gameboard I



Name _____ Date _____

Activity Master 76

Area Capture Gameboard II