Beecher Road School

Summer Math Packet

For

Students Entering Third Grade

Dear Third Grader,

Congratulations on successfully completing second grade! In order to help you maintain all the great strategies, skills, and concepts you learned this year and to be ready for third grade, we hope you complete the attached summer packet. The packet has two calendar pages, one for July and one for August. It also includes directions for math games to be played at home as well as cool math books we recommend. We'd like you to try to spend at least ten minutes each day this summer, 4 – 5 days a week, working on the attached problems, reading some of the suggested math books, visiting the websites, or practicing your math facts.

Just a few minutes each day spent "thinking and talking math" will help reinforce the math that you have learned and begin to prepare you for all the new concepts you will learn in third grade. The goal of this packet is for you to have fun while you keep your math skills and concepts fresh. Remember to communicate your mathematical thinking by discussing how you approached a problem, what strategies you used and why, and how you know your solution makes sense.

When you have completed the packet, please sign your name on the slip at the bottom of this paper and ask your parent to sign it, too. Please return the slip to your third grade teacher in August.

Have a safe and happy summer vacation!

✂--

_____
Date

I, _____, spent at least 200 minutes working on math activities this summer.

_____   _____
Student Signature   Parent Signature

Grade 3 SUMMER Math Ideas

Math Books To Read:

The Greedy Triangle by Marilyn Burns
Measuring Penny by Loreen Leedy
What Comes is 2s, 3s and 4s? by Suzanne Aker
Math for All Seasons by Tomie dePaola
Fraction Fun by David Adler
A Million Fish, More or Less by Patricia McKissack
How Much is a Million? by David Schwartz
If You Made a Million by David Schwartz
The Grapes of Math by Greg Tang
Math for All Seasons by Greg Tang
The Best of Times by Greg Tang
Alexander, Who Used to Be Rich Last Sunday by Judith Viorst
How Big Is A Foot? By Rolf Myller

Books About Perseverance and Mindset:
The Girl Who Never Made Mistakes by Mark Pett and Gary Rubinstein
Making a Splash by Carol E. Reiley
The Most Magnificent Thing by Ashley Spires
Giraffes Can't Dance by Giles Andreae
Your Fantastic Elastic Brain by JoAnn Deak

Games to Play:

Monopoly
Chess
Checkers
Sorry
Connect 4
Qwirkle
Parcheesi
Othello

More Games To Play:

Addition War
Supplies: one deck of playing cards, face cards removed
Number of players: 2
Directions:
1. Divide the cards face down evenly between the players.
2. The first player turns over two cards and says a number sentence that reflects those cards. For example, if the player turns over a 2 and a 3 the player would say, "2 + 3 = 5." That player's sum is 5. The second player turns over two cards and says a number sentence. The player with the higher sum takes all four cards. (Note: ace = 1)
3. War! If the sums of the two players are equal, this is war! Each player places one more card face down and then finds the sum of two more cards placed face up. The player with the higher sum gets all 10 cards.
4. When the original piles are finished, players then use the cards they won to play again. The game is over when one player ends up with all the cards.

The Place Value Game
Purpose of the Game:
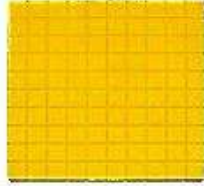To write the greatest three-digit number after four rolls of the die.
Materials:
Place Value Game recording sheet, number cube or die
Directions:
1. Take turns rolling the die.
2. Each time a number is rolled, everyone in the group writes that number in one of the boxes in the place value game recording sheet.
3. Once you write a number you are not allowed to change it.
4. After four rolls you will each have a three-digit number to read and a number in the reject box.
5. The person with the greatest number should put a star next to his or her number.

Place Value Game

Number	Hundreds	Tens	Ones	Reject

Make Ten
Supplies: one deck of playing cards, face cards and 10s removed
Number of players: 2 or more
Directions:
1. Each player chooses five cards from the deck. The remaining cards are stacked in the center.
2. The first player chooses two cards from his or her five cards to make a sum of ten. For example, if the first player has a 4 and a 6 she or he can put those two cards down and say, "4 + 6 = 10". The player then chooses two cards from the center stack. Important: players should always have five cards in their hand.
3. If the first player does not have any cards that make ten he or she can ask another player for a card. For example, if the first player has a 7, the player can ask another player for a 3. If the other player has a 3 that player must give it to the first player. If the other player does not have a 3 then the first player's turn is over. (Note: if the second player gives a card away, she or he should take a card from the middle stack so that she or he still has five cards.)
4. The next player takes a turn and follows the same steps.
5. The game is over when all the cards in the center stack are gone.
"Make 20" – works the same way but players try to make combinations adding up to 20. Include the face cards in this game (Jack = 11, Queen = 12, King = 13) and the 10 card. Players will usually need to use at least three cards to make 20.
(e.g. Jack + 7 + 2 = 20).

Two-Digit War, Add a Multiple of 10
Supplies: one deck of number cards, 0 – 9, one number cube, recording sheet
Directions:
1. Divide the cards face down evenly between the players.
2. Player 1 turns over two cards and makes the greatest possible two-digit number with those cards. For example, if the player turns over a 2 and a 3 the player would make 32. Player 2 turns over two cards and makes the greatest possible two-digit number with his/her two cards.
3. Player 1 rolls the number cube and adds that number of tens to his/her two-digit number. For example, if Player 1 rolls a 4, s/he will add 40 to his/her number. If Player 1 began with 32 the number now becomes 72 (32 + 40 = 72). Player 2 rolls the number cube and adds that number of tens to his/her number. The player with the greatest number wins all the cards.
4. When the original piles are finished, players then use the cards they won to play again. The game is over when one player ends up with all the cards.

Two-Digit War, Add a Multiple of 100
Play is the same as above, except that when the player rolls the number cube s/he adds that number of hundreds to his/her two-digit number.
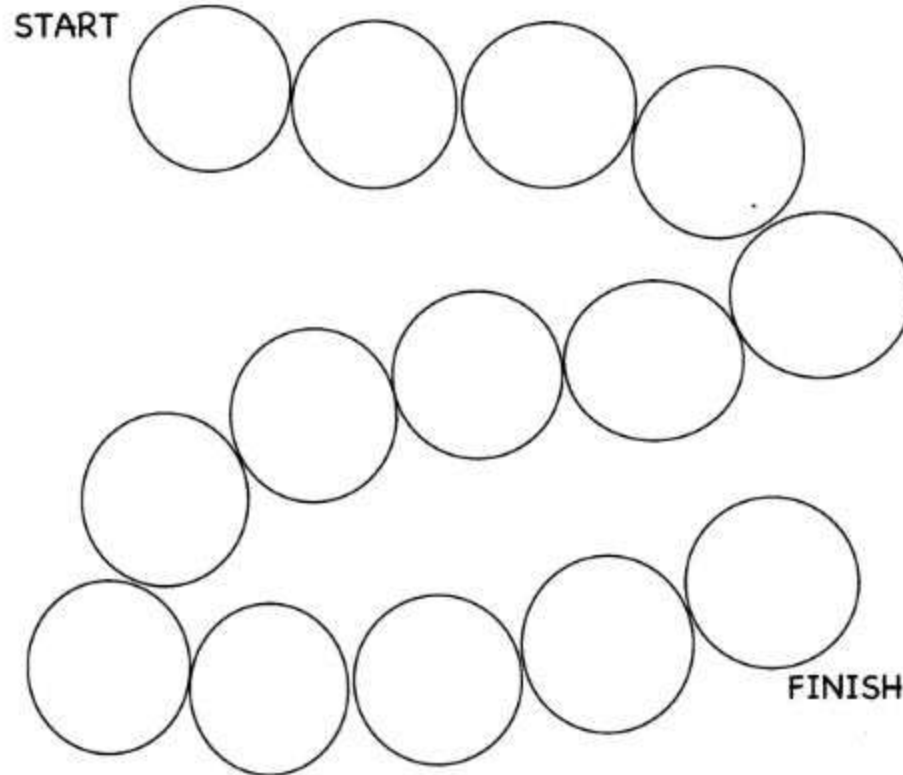
Name_____   Date_____

Number Path

Object of the Game: To write as many numbers as you can in order from least to greatest along the number path.

Directions: Take turns rolling three number cubes. Arrange the cubes to make a three-digit number. Record the number in one of the circles on the path. Once you have written a number you may not change it. If you are unable to write a number on the path you lose a turn. The winner is the first person to fill in all the circles on his or her path.

START

FINISH

Race to Zero!

Directions: Player 1 rolls a number cube. Player 1 decides whether to subtract the number on the cube or ten times that number. For example, if Player 1 rolls a 6 she can subtract 6 or 60. Player 1 writes the difference on the first row and rewrites that number at the beginning of the next row. Then Player 2 takes a turn. The first player to reach zero is the winner.

Player 1 _____	Player 2 _____
300 - =	300 - =

Entering 3rd Grade
July 2018

Add the ages of all the people who live in your house. What is the sum? Is it greater than or less than 100? By how much?	Keep track of the temperature every day for the week. Draw a bar graph. Compare the difference in temperatures.	Use each of the digits 5, 7, and 2 to create different three-digit numbers. What is the greatest number? What is the smallest number? How do you know?	You won first place at a contest! You have two choices for the prize. You can take $20 home with you today OR $2 a day for the next 15 days. Which option earns more money? How much more?	Play "Addition War"
Solve the following riddle. Use the clues to figure out the 2-digit mystery number: My favorite number is between 41 and 49. It is an odd number. The digit in the ones place is greater than 5.	What is today's date? What was the date two weeks ago? What will the date be ten days from now?	Stand and jump as far as you can. Measure using a yardstick or meter stick. Jump 3 times and compare your measurements.	Write down the years people who live with you were born. Put them in order from least to greatest.	Play "The Place Value Game"
Solve the following riddle. Use the clues to figure out the 3-digit mystery number: It is less than 500. All of the digits are even. All of the digits are different numbers. The tens digit is four times the ones digit. What is the mystery number?	Estimate how long it will take you to do 100 jumping jacks. Did it take more or less than 5 minutes? Record your time and compare with a friend.	Delia, Tanya and Suzie decorated 24 cupcakes for the party. Tanya decorated 3 more cupcakes than Delia. Delia and Suzie decorated the same number of cupcakes. How many cupcakes did each girl decorate?	Aisha bought a necklace at Fanny's Flea Market for 55 cents. She used 9 coins to pay for the necklace. Aisha used the same number of quarters as nickels. What coins did she use?	Play "Make Ten"
You have $1.50 in your pocket. Make a list of 10 different combinations of coins you could have in your pocket.	Cut out a picture from a magazine or newspaper. Glue it to a piece of paper. Write a story problem to go along with the picture. Challenge a friend to solve it!	Play a strategy game like Othello or Checkers Did your strategy work? Will you try a different strategy the next time you play?	How many times can you hop on your left foot in a minute? How about your right foot? Compare the number of hops using the symbols <, > or =. What is the difference?	Play "Three-Digit Number Path"

Entering 3rd Grade
August 2018

Find as many different ways as you can to make $1.00 using pennies, nickels, dimes, and quarters.	Read *The Greedy Triangle*, by Marilyn Burns. Then, go on a shape hunt for quadrilaterals (4-sided figures). How many can you find? How are their attributes the same or different?	Use a supermarket flyer to plan a breakfast for your family. List all the items you need and the price for each item. How much will your breakfast cost?	Go on a Treasure Hunt in your house to find different 3-dimensional shapes. Group them by attributes. Which shape did you find most often?	Play "Two-Digit War, Add a Multiple of 10"
Read *Math for All Seasons* by Greg Tang. Make up your own math riddle.	There were 36 horses in the barn. Farmer Joe put some more horses in the barn. There are now 52 horses in the barn. How many horses did Farmer Joe put in the barn?	There are 17 people. How many fingers & toes are there altogether?	The sum of three consecutive numbers is 150. What are the numbers?	Play "Two-Digit War, Add a Multiple of 100"
The kids on Beecher Road counted all of their Halloween candy. They had 18 pieces of candy in all. Use the clues below to find how many pieces of candy each kid had. *Maddie had fewer than 4 pieces of candy. *Ben had twice as much as Maddie. *Chris had twice as much as Ben. *David had 2 pieces more than Maddie.	Use all the digits 8, 1, and 6 to create different 3-digit numbers. What is the greatest number? What is the smallest number? How do you know?	Solve the following riddle. Use the clues to figure out the three-digit mystery number: My favorite number is between 400 and 500. It is an odd number. The digit in the one's place is the same as the digit in the ten's place. The sum of the digits is 6.	Keep track of the temperature every day for the week. Draw a bar graph. Compare the difference in temperatures between the hottest day and the coldest day.	Play "Race to Zero!"
Read *Inch by Inch*, by Leo Lionni. Then go on a Measurement Scavenger Hunt. Find three items that are shorter than one inch and three items that are longer than one inch.	Write a story problem that can be solved with this equation: 43 - 21 = 22	Complete a page from the Snappy Maths website.	Play one of the "Stop the Clock" games from the Oswego School District website.	Play "Three-Digit Number Path"

Today's Target

Today's Target Number is | 10 |

Try to make the target by

1. adding two different numbers   _____

2. subtracting two numbers   _____

3. adding three numbers   _____

4. adding and subtracting   _____

5. starting with a number greater than 20   _____

6. using all even numbers   _____

7. adding four numbers   _____

Today's Target

Today's Target Number is ☐ **8**

Try to make the target by

1. adding two different numbers _____

2. subtracting two numbers _____

3. adding three numbers _____

4. adding and subtracting _____

5. starting with a number greater than 10 _____

6. using all even numbers _____

7. adding four numbers _____

Optional Weekly Activities

Activity One: A Family Outing
Your parents have asked you to research and compare the cost of different family outings so that you can recommend one that will be fun, but doesn't cost too much. Research the costs involved in all the members of your immediate family visiting the following places on a Saturday afternoon: an ice-skating rink, a museum, an amusement park, the zoo, or a movie theater. You may use the newspaper or the Internet to get your information. Then present your recommendation to your parents. Make sure you include a breakdown of the entrance costs for your family for each of the places you researched, and be sure to explain why this outing would make the best choice!

Activity Two: Feeding a Family
Research how much you would need to spend to feed a family of four for one day. Plan three meals for that day, using healthful food choices. You may choose to use Internet grocery stores to find the cost of individual food items, visit a supermarket, or use grocery store fliers. Make sure to create a menu for that day. Show all of your work, including the costs of individual items.

Activity Three: Create A Family Pet
Find three-dimensional shaped objects in your home. Some examples include milk cartons, oatmeal containers, straws, and tissue boxes. Decide what animal you would like to have for a pet. Then, glue, color, and create your own pet using the three-dimensional objects you found. Make sure you can explain to your parents which shapes you used in your creation. Challenge yourself to list the attributes of each shape.

Activity Four: Make Your Own Map with POLYGONS
Using your street as a reference, draw a map of the street with each of the houses included. The houses must be made of polygons (for example: squares, rectangles, triangles, trapezoids, hexagons, pentagons, octagons). Color your map and label each polygon. Then count how many of each type of polygon you used. Present the information to your family and WOW them with your knowledge of geometry!

Activity Five: Feeding Your Dog
Your job this summer is to take care of your pet dog. You need to feed the dog every day. He is an average-sized dog who eats two cups of dog food a day. How many cups will you need for a week? How many will you need for a month (30 days)? How many cups will you need for a year (365 days)? Would your answers change if it were a really small dog or a really big dog? Share your thinking with a member in your family. CHALLENGE: How many bags of dog food would you need to buy each week/month/year if each bag holds 60 cups?

Activity Six: Planning a Birthday Party
Your mom and dad said that you can help plan your birthday party! YAY! You are to pick the theme of the party and make a list of all the items that you will need: tablecloth, goody bags, goody bag items, cups, plates, forks, balloons, and, of course, the cake. You may use the Internet for your research or look at fliers or catalogs. You might even want to visit Party City or other places to find out how much it would cost to have a party if you invited ten friends. Share the list and the expenses with your parents.

Activity Seven: Packing Your Books to Move

Your mother has just told you that you are moving, and you need to pack all of your books into cartons. You have 120 books and seven cartons. Plan how many books will go in each box. Make sure that each box won't be too heavy by distributing the books as evenly as possible in the 7 cartons. Then explain to your mom how you would pack the books, and how you came up with your answer.

Activity Eight: Visiting the Maritime Aquarium

You are planning a trip to the Maritime Aquarium in Norwalk. The hours of the Aquarium are 10AM to 5 PM. You want to make sure that you see everything there is to see. Research the Maritime website to help plan your day. You should include IMAX movie, special exhibits, and eating lunch. Make a schedule of your day and the time that you will be going to each event and calculate the amount of minutes spent on each activity. Share your schedule with a member of your family.