



Important Dates and Reminders

Saturday, May 11, 7:00pm - 11:00pm
Mission Hill Get Down!

Tuesday, May 21 - Friday, May 24
8th Grade Portfolio Presentations

Friday, May 24, 9:45am - 10:15am
Friday Share: 8th Grade Art Show

May 10, 2019

Volume 22, Issue 27

Math in Our Everyday Lives

Dear Mission Hill School Friends, Families, Students and Staff,

This week's newsletter is dedicated to math. I started thinking about the content for this letter to you while on my way to meet Katie's class at the Wang theater on Sunday. Katie organized a class trip to see Alvin Ailey.

My thinking about mathematics started when I was counting stops on the train. I counted stops and I started noticing how much time passed between each stop. Would I arrive on time? I had a choice of two train stops. It was math thinking that helped me make the right choice based on the shortest distance from the train stop to the Wang theater. When I arrived at the theater Katie greeted me and handed me my ticket. She purchased a set of tickets for the class. An anonymous donor donated \$500 toward the cost of the tickets. If Katie purchased 20 tickets, and we each paid \$33.50 for the ticket how much was the original cost?



Donald Crews, author of *10 Black Dots!*

The performance was wonderful! It was also full of math to think about. The set design included patterns that sparked the imagination. The music and dancers had rhythm based on counts that kept everyone in sync with the music. One segment of the performance was centered around the theme of time. The sound of a clock ticking filled the air and the dancers provided the illusion of a clock through their positions and movements. It was difficult to not think of the concept of time and how minutes are of equal measure but some minutes feel longer or shorter. On the way home I decided to start counting my steps, something I did as a kid every afternoon when I walked home from my school bus stop. I stopped counting sometime after a thousand, but I had fun connecting numbers to my movements.

This little math story was a slice of everyday life. What's the math in your world? What's your math story? Numbers can be key to illustrating an idea or event.

I hope you will invite your child to think about the things in their daily lives mathematically. Math thinking habits that are developed at home help kids to see math as fun. Math puzzles are also great way to have math conversations at home that are fun and interesting. Consider solving or just discussing math puzzles at dinner time or as another part of the nightly routine with our child(ren).

Ayla Gavins

KINDERGARTEN

Room 106

Kathy, Liana & June

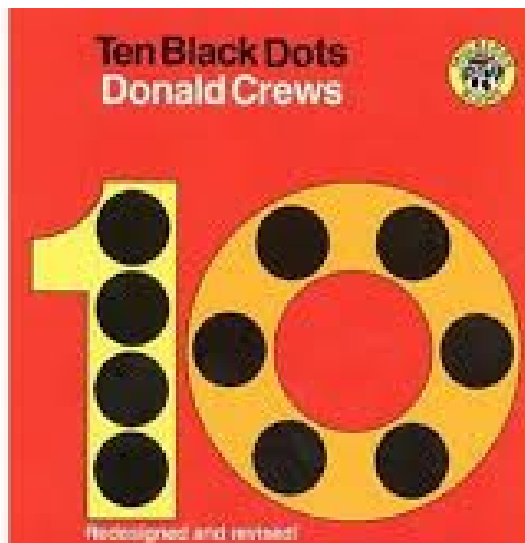
Word problems, data collection, and geometry . . . Oh my!

In room 106 we have been working on word problems. The children have been listening to the word problem and trying to figure out how to solve it. They then have been sharing their strategies with the group. We have named certain strategies after students. For example, we have a Manny strategy to figure out how to solve a math problem. Children connect to the strategy and try it themselves to solve a problem.

Data collection has also been a part of our class. Teeth have been a hot topic in our room and the children find it very hard to not have their fingers in their mouth touching their wiggly teeth. We made a graph of data we collected about the number of teeth students lost in the class. The data analysts made amazing observations. They realized how many people took the survey and how many people still needed to take it. We also discovered that most people in the class have not yet lost a tooth.

We started our quilt making this week. We are making a quilt using the North Star pattern. Our amazing volunteer Carol is a quilter and helped us cut out the eight triangles and the squares for each design. Now it is time for you to do the math . . . If there are 16 children in the class and each child gets eight triangles, how many triangles will be on the quilt?

-Kathy



Ten Black Dots, by Donald Crews

Room 107

Jada & Manny

The Dragon Kitties have delved deeper into what freedom means and what it looks like to not have it. We spoke about slavery, defining it as being forced to work without getting paid. Books like *Sweet Clara and the Freedom Quilt* and *Follow the Drinking Gourd* helped us see what the lives of the slaves in the south looked

like. They helped us picture the injustice and gave us examples of people having the courage to stand up and fight for the right to freedom and (as the legend says) their wisdom in hiding paths in the unassuming beauty of quilts. That led us to look closely at the shapes in those quilts and replicate a few patterns (quilt codes) said to be a part of The Underground Railroad. With our knowledge about the attributes of squares and triangles, we learned that each pattern had a hidden meaning. The Crossroads pattern (4 squares) referred “... to Cleveland, Ohio... the main crossroads with several routes to freedom”; the Flying Geese pattern (8 triangles) instructed runaways to “follow the direction of the flying geese [north]...in the spring” and the Bowtie pattern (8 triangles) meant “... to change from the clothing of a slave” to those of a free man.

-Jada

Room 108

Geralyn & Donna

Did you ever stop to think about the song BINGO - and how it is all about combinations of five? For the first verse we sing all five letters: B-I-N-G-O. Then, we begin replacing a letter with a clap. The second verse is CLAP -I-N-G-O, followed by CLAP, CLAP, N-G-O until the final verse which is five claps.

The pattern of this song and all the combinations of 5 have fascinated our class and they have worked hard to master it. We have had many experiences representing these combinations of five, all of which help children deepen their understanding of “five”. This week, we also worked on creating our own “dot books” based on combinations of five, and inspired by Donald Crews’ beloved book *Ten Black Dots*.

-Geraldyn

Room 109

Katie & Mary

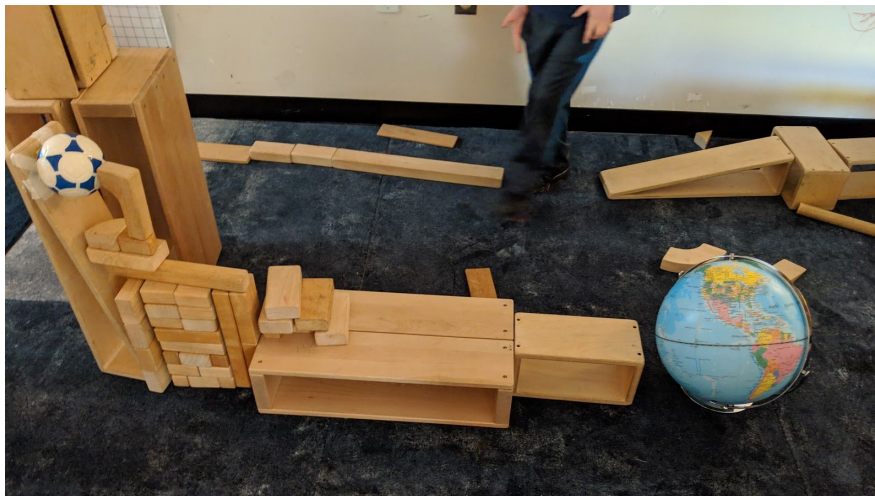
Can you build a path from the Earth to the Moon? This was

asked of innovator Katherine Johnson in 1969. The NASA mathematician (then called a *computer*) was charged with computing the flight path of the Apollo 11 when an explosion happened in outer space on the way from Earth to the Moon. Her talent for math saved the day as she precisely calculated the effects of gravity so that the Apollo 11 slingshotted back home to Earth!

We asked the children this same question: *Can you build a*

path from the Earth to the Moon? The children used a model Earth and a model Moon, and they built a path with blocks. They found fascinating ways to build paths, and next week they will be measuring the distance (using standard and non-standard units to measure). From studying the great African American mathematician Katherine Johnson, we hope the children learn about the relevance of math for solving real world problems, the importance of accuracy and precision when calculating, and the equivalence of the total distance no matter the units.

-Katie



Blocks, earth to moon!

GRADES 1 & 2

Room 205

Ashleigh & Alana

“I wish I could do math all day long!” Olivia commented one day recently. Although our

official math time had ended and the class was headed out to recess, Olivia continued her math thinking outside. She gathered up tiny twigs and small wood chips. Then she arranged them on a bench. She used 4 twigs to create a large square representing 100. Then she laid out 4 twigs next to each other to show 4 tens. Finally, there were 5 wood chips in the line. “That’s 145!” Xander shouted as he walked by the bench. Then Clementine came over, and she began joining in Olivia’s mathematical representations. It was exciting to see students choosing to do math during their free time and finding new materials to

represent what they had been learning. What other unconventional materials can you use to show your math thinking and knowledge?

-Ashleigh

Room 216

Danny & Felicia

“‘Ser Tommy has 15 blue tigers in his castle. Some tigers hatch a plan and break free. There are 8 blue tigers left in the castle. How many escaped?’ Now, is that a regular problem or a missing part problem? I don’t want to hear a number, I want to know what type of

problem this is.” In our final unit of math for the year, Varied Story Problems, we have been talking a lot about the language of word problems and how they connect to math equations. The equations which can come from a word problem are often very complex, such as “*Anish has 7 shields. Yaniel has 10. How many more shields does Yaniel have?*” being a subtraction problem despite containing the word *more*, with an equation of $10-7=$ __ that does not match the order of numbers in the problem. So what do we do? We spend a lot of time discussing number sense- which number will be the biggest? Are we going from big to small or small to big? How many numbers do we have in this problem? When students understand the landscape of the problem, they are more likely to determine an equation that makes sense for what they are trying to figure out. The Dragons are strong mathematicians, and we are excited to see their continued growth as we close out this school year!

-Danny

Room 217

Kate & Stephanie

The Shooting Star Pals in room 217 are a group of hard working mathematicians! We have a math community that is curious, thoughtful, resourceful, and

increasingly independent. At the start of the school year our class struggled to work on their own at math. Students, especially first grade students that were not used to our math routine, wanted teachers to sit with them alone to help them. They were not confidently able to work at tables by themselves even on work that had minimal directions and was at their ability level. Through repeated routine, engaging small group and whole group lessons, and encouragement of peer partner work students have gained a lot of confidence in themselves. We have a math meeting to begin every math lesson. Usually the meeting is in a whole group but sometimes the group is divided in half to half richer conversation where every child is vocal. We encourage math talk that explains mathematical thinking aloud and models for other students. We also encourage children to verbalize how they solved a problem differently than a peer to explore different strategies.

-Kate

GRADES 3 & 4

Room 203

Jenerra & Mayra

This year, we initiated the Mission Hill Math Challenge, a weekly problem shared by our Math Team for the whole school to solve. Presenting the

Challenge is a part of our school wide math focus. The problems cover a wide variety of math topics and are meant to work your math mind! Each Friday, during Friday Share, Danny or Cleata shares a few examples of students' work from the problem that week. The Ninjas work on the MH Math Challenge every Wednesday morning as a part of our morning work. When we initially began doing them, there was some hesitation with students starting the problems. Now, the Ninjas know that Wednesday is Math Challenge day and they come in ready to tackle it! It has brought mathematicians together that don't usually work together. It has allowed reluctant mathematicians, and workers in general, to find confidence in starting a problem and sticking with it. The adults are even learning new math and ways to think about a problem through the children's work. Many pieces of work from the Ninjas have been featured at Friday Share, and it makes them feel so proud to see their work on the big screen! Thank you Math Team for adding this wonderful new tradition to our community. I look forward to seeing it grow!

-Jenerra

Room 207

Amanda & Amina

When I was a 4th grade mathematician I HATED MATH! I sat back, tried to be unnoticed and often flew under the radar.

Fast forward approximately 38 years. We start math class with a math warm up. This is a time where we cover a concept that may not be part of our current math lesson. During the warm up a teacher shares a math problem, on the board and students solve it. Some immediately raise their hand eager to share. I ALWAYS make sure to repeat the question several times and give extra time for those who may need it. Often I call on reluctant mathematicians and I remind them that I was once a reluctant mathematician (sometimes I still am) and we work through the problem together. It is exhilarating to see students work through their challenges and find success. Their proud smiles, after pushing through the challenge is PRICELESS! I wish I had teachers who cared when I struggled and who took the time to support me. It is my hope that 10, 20 even 30 years from now some of our struggling mathematicians will look back at their 4th grade math class and remember things they learned and that their teachers **truly** cared.

-Amina

Room 212

Cleata & Ayan

No news. Check back next week.

GRADES 5 & 6

Room 210

Nakia & Kat

No news. Check back next week.

Room 215

Abdi & Courtney M.

Sixth graders kicked off a new unit this week in math -- Expression & Equations. This is an essential unit in their preparation for seventh grade math because it addresses many levels of pre algebraic

Skye and Sara playing a math game



knowledge and skills; including, using variables to represent numbers, understanding dependent and independent variables, and solving real-world problems by writing and solving equations. Our first investigation asked students to partner up and record the total number of jumping jacks a student could do in 10-second intervals for 2 minutes. The purpose of this was for student to analyze their data for variations throughout the intervals. After they did their jumping jacks, they created a data table, made a graph of the data, looked for patterns in the table and graph, and then compared the patterns between the two modes of representation. Did I mention that they also had a great time?

See pictures below for evidence of a great time had by all.

-Vanessa and Kathy B.

GRADES 7 & 8

Room 213

Jenna & Natel

In 7th grade math we have been exploring probability through playing different probability games. After each game, we have discussed how to calculate the theoretical and experimental probability of each partner winning the game and then assessing, based on the

probability we calculated, whether or not the game is fair. A common question we have been debating is whether a game can still be fair even if it is “rigged” and a participant is unlikely to win. As a final project for this unit, students will be creating their own probability game that will be displayed at a Probability Fair in a couple of

weeks. We hope that many members of our community will be able to stop by and play the games our students will be creating and learn about probability from our 7th grade experts!

Sara, Skye, Jack and Justin play a “coin” (tile) tossing game to figure out if there is the same

probability of getting two coins to match (both the same color) versus getting the coins not to match (different colors).

-Jenna

Room 214
Reginald & Frances
No news. Check back next week

Ayla Gavins, Principal Deborah Meier, Founder Laura Perille, Interim Superintendent	Mission Hill K-8 School A Boston Public Pilot School WWW.MISSIONHILLSCHOOL.ORG	20 Child Street Jamaica Plain, MA 02130 T 617-365-6384 F 617-635-6419
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Dear Mission Hill Families,

Our school-wide, K0-8th grade Mission Hill music concert will be on **Wednesday, May 22nd, at 4:45pm**. All of our students have worked incredibly hard on the songs they will be singing and playing at this year's concert, and we're all looking forward to sharing our music with our school community! Permission slips will be going home this Friday so that parents can confirm whether or not students will stay after school with teachers until their families join them for the concert, or if they are to go home first and then return with their families. Students are encouraged to wear a combination of school colors: black, white, and/or navy blue.

I look forward to meeting Mission Hill families at the concert!

Cara



Save The Date

Mission Hill School
Music Concert
Wednesday, May 22, 2019
4:45 PM

At the Mission Hill School
Auditorium

Located at 20 Child St. Jamaica Plain

ALL Children in K0 through 8th grades will be performing and are expected to participate. Our various music ensembles will perform as well.



Guarde la Fecha

Mission Hill School
Concierto de Música
Miércoles, 22 de Mayo, 2019
4:45 PM

En el Auditorio de Mission Hill
School

Ubicado en 20 Child St. Jamaica Plain

Todos los niños de K0 a 8 ° grado se presentarán y se espera que participen.

	Nuestros diversos conjuntos de música realizarán conciertos también.
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LET'S
GO
CRAZY

MISSION HILL
GET DOWN PARTY!

SATURDAY, MAY 11TH

7:00PM — 11:00PM

SPONTANEOUS CELEBRATIONS

TICKETS \$25.00 ON [EVENTBRITE.COM](https://www.eventbrite.com)
OR TICKETS AT THE DOOR

MUSIC, DRINKS, DANCING
AND FUN COME AS YOU
WERE BACK IN THE DAY.

IF THE COST IS PROHIBITIVE— NO PROBLEM!
JUST GET A FREE TICKET FROM MHS OFFICE
OR LET US KNOW AT THE DOOR.

Party
LIKE ITS
1999

ADULTS ONLY