Danbury Park Community Primary School Let's Investigate Maths Week Newsletter Special Report

<u>Class Jay</u>

Let's Investigate - Measurement.

In Class Jay, we enjoyed investigating height and length. The children took part in a carousel of practical activities each day. Our question to start us off was 'Who is the tallest person in the class?' The children all named the oldest child so, we went on to investigate if this was a true, is the oldest child the tallest. We explored non-standard units of measurement such as using multilink, our hands, feet, string etc. We used ourselves, items from the classroom and animals from our story and investigated their height and length.



Class Hummingbird

In Class Hummingbird the children have enjoyed investigating measurement. They have had to find the answers to the following

questions:

- Is the oldest person in the class the tallest?
- Does the tallest person in the class have the biggest feet?
- Does the smallest person in the class have the smallest hands?
- Is Mrs Smith the same height as she is length?



The children have explored using a variety of resources to measure themselves and their friends! They learnt about using the same resources to measure things in order for their answer to be accurate and that you need to make sure that you start at the bottom of what you are measuring. We then recorded all our answers and answered the questions using this information.

Class Goldfinch

Last week we had lots of fun investigating in our Maths lessons as part of Let's Investigate week. We started the week by investigating answers to a guestion on fractions. The Year 1s and 2s each had different questions. To complete the task, we worked in pairs and used our fraction mats to investigate which of the statements we would rather have as it gave us the greatest amount.





On Tuesday, we were joined by our class Governor, Mrs Le Monde. Miss Johnston gave each group a food based investigation. Some groups were given amounts of food in a picnic basket and they had to investigate how much food would be available for the number of tables at the picnic. Other groups had to make sure that the two shopping baskets they were given had equal quantities of food and then investigate if there was more than one way for this to be done.



On Wednesday, we completed the second part of our investigation building on our prior learning from Tuesday. We investigated how much food each person at each table would receive. To do this we used our fraction mats and manipulatives to help us check our answers.

On Thursday, we were given a fractions of shape investigation. We were asked to find as many ways as possible to show a half of different shapes. It was the first time we had used dotty paper to draw shapes on. We thought it was going to be easy but it proved to be a little more challenging than we thought!

Finally, on Friday we had different investigations to choose from:

'A City of Towers' was an investigation into combinations of a number of cubes. Some children worked in pairs using cubes to follow the rules in the story to help us find all the possible combinations.





'Thirsty?' We needed to coordinate three pieces of information about each glass: what it contains (orange or blackcurrant juice); how much it contains (full, half full or empty) and its height (tall or short). Mr Rutland worked with this group.

'Robot Monsters' involved measuring and made us use addition, ordering numbers and investigate different combinations.

'Ladybirds in the garden' .This investigation involved exploring what system we needed to help us to find all the possible totals and give Miss Johnston reasons why some couldn't be made.



We really enjoyed our Maths week and the different investigations and challenges given.

Class Flamingo

This week we have enjoyed many practical, fun and investigative maths lessons. We have covered time, shape, number, measure, money as well as lots of mathematical reasoning. We have really enjoyed the practical lessons, but also all the discussing and team work that we have taken part in too.



On Monday we had to investigate how many matchsticks it took to make different sized triangles. Some of us could see the pattern in the numbers and used this to quickly work out how many matchsticks were needed to make a given number of triangles. We even came up with a formula for



working it out. After this we worked on a money related investigation where we had to work logically to work out all the totals from a certain number of coins.



On Tuesday we worked in groups to make certain totals by throwing a ball into a numbered cup. This really was a lot of fun (once we got the knack of throwing the ball accurately). We quickly worked out which cups we needed to aim for.

On Wednesday we had to think carefully about time and get ready for some heated discussions about how long certain events and tasks took. We were given lots of different events and tasks which we had to put in time order. These ranged from how long ago was The Great Fire of London, 24 months, 1000 seconds, time taken to tidy your room and time it takes to run one lap of the Daily Mile Track.





Thursday saw us thinking about Always, Sometimes and Never where we had to investigate a statement such as an even number plus an even number always totals an even number- always, sometimes or never? After this we played various versions of Top Trumps to challenge our reading of numbers.

Friday ended with tangrams which was a great way to end the week.

<u>Class Eider</u>

On Monday Class Eider worked on investigating a tube of Smarties! They estimated and predicted the number and colour of sweets in the packet. Then they counted and sorted using maths skills to tally and make bar graphs. They were able to ask and answer questions about their statistics. We found out





On Tuesday the children used their knowledge of times tables to make Tables Houses and investigate how multiplication and division facts are related. We can use our times table houses to help us solve problems too.





On Wednesday class Eider became a pizza parlour! We made and bought virtual pizzas investigating how to make pizzas for £1 using a variety on toppings. We had to use addition, subtraction and multiplication skills to work out how to make the cheapest and most expensive pizza. We also had to design and cost our favourite pizzas.

On Thursday, we investigated which 3D shapes we could build with cocktail sticks and mini gems. Class E then used the shapes they had built to help identify the different features of the shapes: faces, vertices and edges. We were very lucky to have Mrs Moulding, our class governor, to help us!







On Friday, Class E used dotty isometric paper and peg boards to find as many 2D shapes as they could. We accurately drew them with a sharp pencil and a ruler. As a challenge, we tried to draw as many different triangles as possible: equilateral, isosceles, scalene and right-angled triangles.



<u>Class Dove</u>

During the week we investigated shapes and fractions. On the first day of the week our class governor, Mr Moore, came to join us. Our task was to find different fractions to make a whole. We used a fraction wall and we found lots of different ways to make a whole. Ted said, "I found three different ways to make a whole." Oscar thought today's lesson was very interesting and fun. Before Mr Moore left he said he was impressed by the children's ability to find a relationship between fraction and shapes.



On Tuesday 1st February we learnt about tangrams. A tangram is an ancient Chinese puzzle. We were given a collection of tangrams and a large piece of white paper. The Year 3 task was to make as many different squares as they could. The Year 4 could make any shape but they had to name it. We then looked at the different fractions within our shapes. Ruby made a square using two small triangles and one large triangle meaning 2/3 of her shapes were small triangles. Avalon said, "We learnt about new shapes and had fun at the same time."

On Wednesday the Year 4 found pentominoes. A pentomino is a shape made from five identical squares. After searching they discovered it is



possible to create 12 pentominoes. After finding the pentominoes, the Year 4 were asked to investigate how many of the pentominoes could fold into an open box. Teigi had most success with 6 open boxes. The Year 3 children set Mrs Ireland a challenge. They made lots of 3-d shapes but did not know the names. Could Mrs Ireland name them? "It was a tricky challenge but amazing," said Ruby. Oliver's shape is yet to be identified!

On Thursday, we had to design a patio that was 10×10 squares big. We could use square tiles that were 1×1 to 9×9 in size (we couldn't use 10×10 as it would fill the whole patio). We used a variety of different size tiles and shaded them in different colours. After we had made our designs we had to look for fractions, for example 4/25 of the tiles were 4×4 sized. We then recorded these fraction facts on our recording sheet.

Our work on Friday was to investigate with numbers. We used A3 graph paper and glued a variety of maths challenges on and tried to solve the question. These tested our brains, especially when Mrs Ireland wanted evidence! The trickiest challenge was the missing number challenge. We had to figure out the missing number on the square. In the end, to solve this problem we had to look at the answer and work backwards. The problem is shown below. Can you solve it?

| What's missing? | | |
|-----------------|---|----|
| 3 | 1 | 7 |
| 6 | 4 | 34 |
| 8 | 7 | 71 |
| 9 | 8 | |

Find the value of the missing number in the table above.

We had a great week and enjoyed the opportunities to use our mathematical knowledge to solve mathematical problems.

Class Cuckoo

In Class Cuckoo we investigated Pentominoes. Pentominoes are a shape made using 5 squares. First we had to find all twelve different combinations. We soon discovered that some of the shapes created were not different, as they were simply rotated or reflected shapes. We used cubes to build the shapes to help us check we had 12 different Pentominoes.



These are the 12 different Pentominoes.



Our next challenge was to use the shapes created to make a rectangle. Knowing that we had 12 shapes of 5 squares, we used our area knowledge to calculate the possible sizes of rectangles that could be created with an area of 60 squares.

Working in maths often involves making mistakes, looking again and trying different possible solutions. So often it seemed we had created a rectangle, for one shape to be slightly out of position. Perseverance and having a mindset of not giving up was key to our success!







<u>Class Budgerigar</u>

Budgerigar Class have been investigating the Fibonacci sequence. Fibonacci was an Italian mathematician who was the first to record this fascinating number pattern.

He realized that by adding the last two numbers to get the next a sequence develops. A common sequence begins; 1+1=2 1+2=3 2+3=5 3+5=8 5+8=13 13+21=34 21=34=55 34+55=89 55+89=144, although a Fibonacci sequence can begin with any two numbers.

We then used these numbers as measurements and drew them as a spiral onto squared paper. Artists and architects have interpreted the sequence in their art. Such famous works as the Mona Lisa use this sequence.

The sequence occurs naturally in shells, flowers and insects. We incorporated the sequence into our own work.







<u>Class Avocet</u>

Maths week started on the week beginning 31st of January. Our topic for the week was digital roots and we thoroughly enjoyed it. A digital root is the sum of the digits in a number. The week started with us speculating about what we were going to do during the time that we had. On Monday, we filled out a multiplication square up to 12 and used this to find out the digital roots of each multiple. The following day was thought to be any other day, but we came in and loved what Mrs Booth had planned. We used the digital roots from the day before to make patterns using a circle with numbers up to 9 around the edge and joining each digital root to the next.



Mid-way through the week, the class carried on drawing and colouring the circles from the prior day getting them ready for display. This included lots of cutting and gluing. Our aim was to complete the circle patterns for the times tables up to 12.



Lastly, the class had another fun day in store. With a similar format as the previous days, we enjoyed ourselves completing yet another task: square grid patterns.

Overall, the class found the week very exciting and enjoyed investigating the different digital root patterns from the times tables.

Dexter and Fern