



**Bal Bharati**  
**PUBLIC SCHOOL**

Sector-21, Noida, G.B. Nagar



# INFINITY

**-It all adds up.**

**Maths Newsletter-Primary Wing**

Mathematics is the most  
beautiful and the most  
powerful creation of the  
human spirit.

**-Stefan Banach**



# FROM PRINCIPAL'S DESK

FINDING THE  
SOLUTION  
WITH  
 $LHS = RHS$

**NEP 2020 states that "Education must move towards less content, and more towards learning on how to think critically and solve problems, how to innovate, adapt, and absorb new material in novel and changing fields."**

**As today's children are the citizens of tomorrow, it is our moral responsibility to provide conducive learning opportunities and experiences in a positive, healthy and safe environment.**

**In our constant endeavour to provide our learners with stimulating learning opportunities, innovative and interesting plethora of activities, various pedagogies are incorporated in the curriculum. These activities add to their concept building, multiplying their joyfulness, dividing their experiences, subtracting their fears of basic mathematical operations during the foundational years!!**

***"The essence of Mathematics is not to make simple things complicated, but to make complicated things simple."***

**- Ms. Asha Prabhakar  
Principal**



We know how to calculate Principal Amount, it's  $P = I/RT$ , but there's no formula to be one!



# FROM HM's DESK

JUST LIKE A PIE  
( $\pi$ ), NEVER ENDING  
AND SWEET

A pandemic unfurled. Lives of hundreds swirled but we, at Bal Bharati Public School, Noida didn't flinch at all. Today, human society stands at an important crossroads and we knew we had a challenge to overcome. This issue of the newsletter is a testimony to the fact that we, at Bal Bharati Public School, Noida believe in innovations, even this newsletter will take you through the metamorphosis of our students in the most challenging year. To understand mathematical concepts efficiently, we believe in learning through experiences by making the curriculum 'hands-on' and 'interactive'. Today, we urge you to join us and be a part of our journey paving the way to new discoveries. From intra school activities to inter school events, we hope to keep you abreast with new updates every year. Challenge, Experience, Growth!

- Ms Vinaya Pujari  
HM (Primary)



The Probability of getting Heads is 50%, but it's already 100 here.

# MEET THE EDITORIAL TEAM...

DIVIDING  
THE TASKS  
WITH THE  
TEAM



*Ms Palak Goel*



*Ms Sona Rawat*



*Ms Remil Elias*



*Ms Parimeeta Khanna*



*Ms Monika Panwar*



*Ms Ruchika Khanna*



*Ms Dhanya Patil*



*Ms Shilpi Singh*



*Ms Leena Madan*

In the educational field, we had many reasons to ponder over the grave pandemic situation, but we also had many reasons to be grateful. The knowledge that we acquired in the past two years is a living proof that education cannot be contained, and knowledge cannot be stopped. With this vision, we were able to make learning more fun, engaging and experiential. Teaching of mathematics, which has often been associated with fun and brainstorming, also faced the challenge of maintaining the same kind of aura. Online teaching has proven to be a boon in this matter. With a plethora of activities available, teaching of mathematics became more interesting and engaging. Adding to the existing collection of teaching material, new and more exciting material was added by the educators. Through this Mathematics Newsletter, we aim to provide the glimpses of various innovations done in the field of teaching and learning of mathematics. We hope this joyful rewind of several months will prove to be an insightful experience for you.



*Ms Mukul Srivastava*



*Ms Ekta Behal*



*Ms Richa Gupta*

Zero said to  
Eight you've  
got some  
nice editing  
skills with  
that belt!



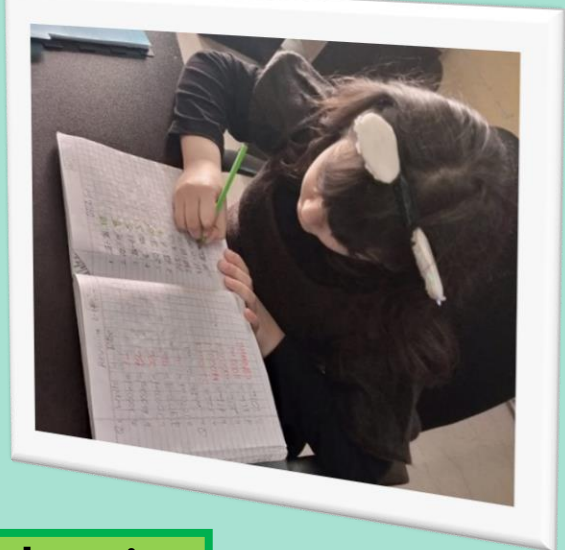
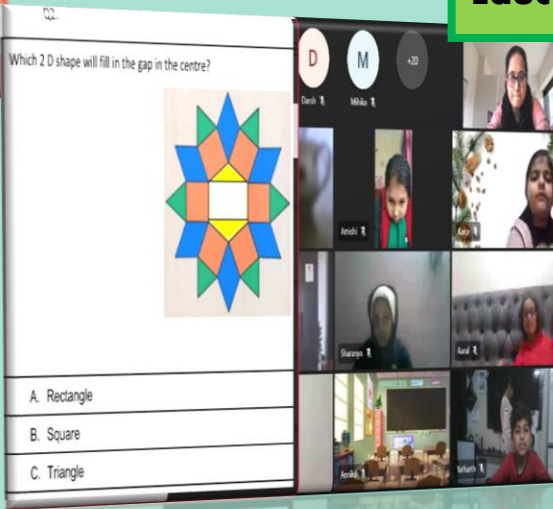
# CELEBRATING THE COMPLETION OF ONE YEAR OF NEP

GETTING  
FUTURE READY



## NIPUN BHARAT

**National Initiative for Proficiency in Reading with Understanding and Numeracy, A National mission on Foundational Literacy and Numeracy** was launched by the Ministry of Education to ensure that every child in the country attains basic mathematical skills by the end of grade 3. To assess the nationwide Foundational Literacy and Numeracy, National Achievement Survey (NAS) of students' learning was undertaken by the Ministry of Education.



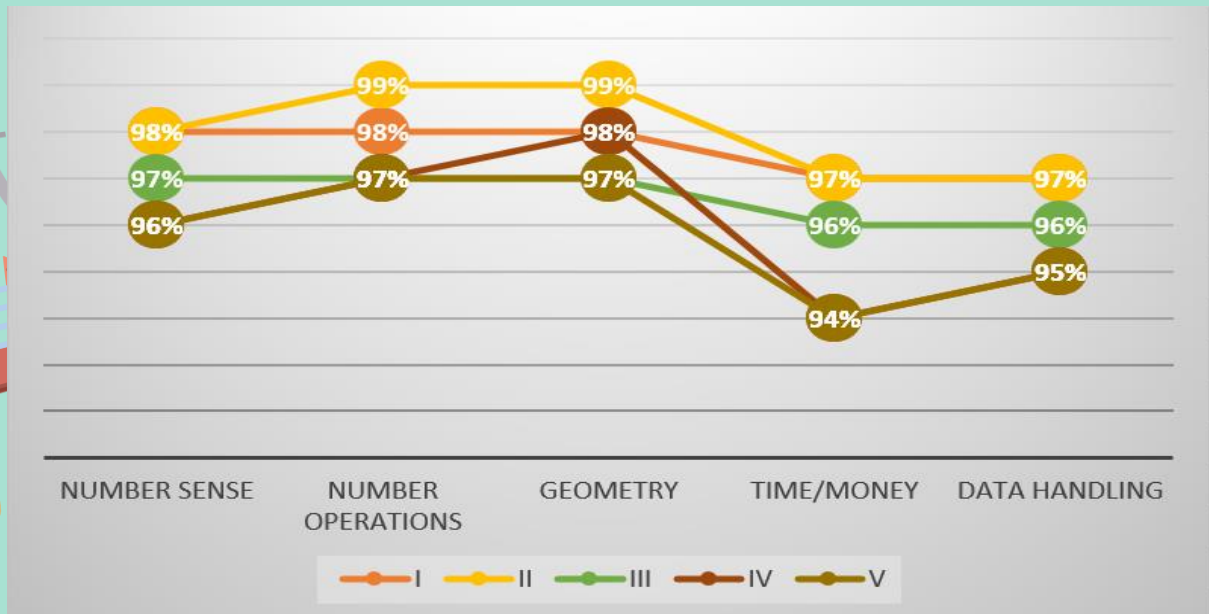
To benchmark students' learning against criteria such as process skills and learning outcomes, educators at Bal Bharati Public School, Noida framed questions as per National Achievement Survey (NAS) focusing on age appropriate questions which helped in attaining the targets and nationwide milestones.

**Question:** Why should you never argue with decimals?  
**Answer:** Decimals always have a point.

# WINNING THE GAME OF NUMBERS - NUMERACY ANALYSIS

STEPPING  
TOWARDS  
NUMERACY

More than 90% of the students surpassed the level of learning competencies. However, initiatives were taken to mitigate the learning gaps, related to the concept "Time and Money".



Class/Topics	Number Sense	Number Operations	Geometry	Time/Money	Data Handling
I	98%	98%	98%	97%	97%
II	98%	99%	99%	97%	97%
III	97%	97%	97%	96%	96%
IV	96%	97%	98%	94%	95%
V	96%	97%	97%	94%	95%

Class1 -97%

Class 2 -98%

Class 3-95%

Class4 -94%

Class5 -94%

Level of Achievement

A Pyramid is a 3-D shape with polygonal base and flat triangular faces.

# YOU HAVE A PLAN. I HAVE A PLAN. WE TOGETHER HAVE LESSON PLANS

SUBTRACTING  
THE MONOTONY

Interesting lesson plans were designed to explain different mathematical concepts to the young learners in order to boost their creativity and confidence.



Understanding Shapes

Innovation in education encourages teachers and students to explore, research and use the maximum tools to uncover their potential. It involves a different way of looking at problems and solving them. The thinking process that helps students develop their creativity and problem solving skills. Teachers used different visual material in the form of teaching aids to make their lesson plans more innovative and interesting for the students.



Measuring Weights

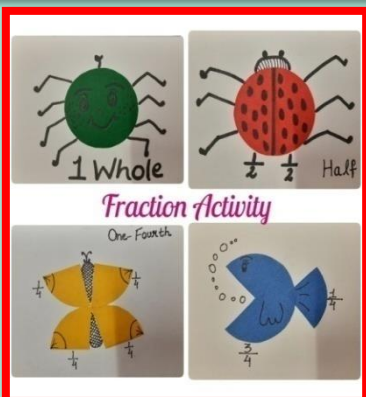
Counting Money



Handling Data



Divide and Conquer



Fraction Activity



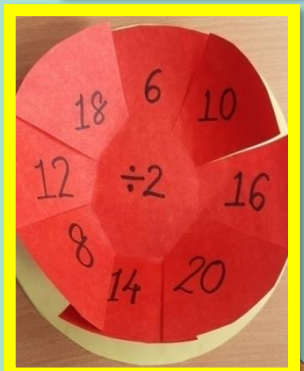
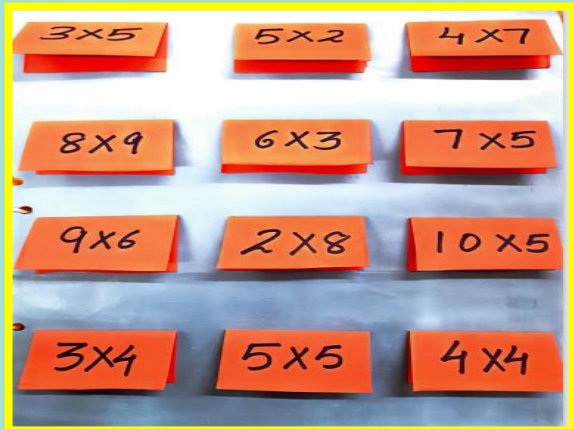
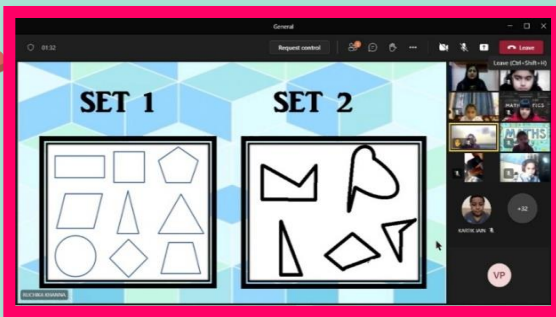
The numbers on the opposite sides of a die always add up to seven.





TOGETHER, WE AMPLIFY OUR ABILITIES

SUBTRACTING  
THE MONOTONY



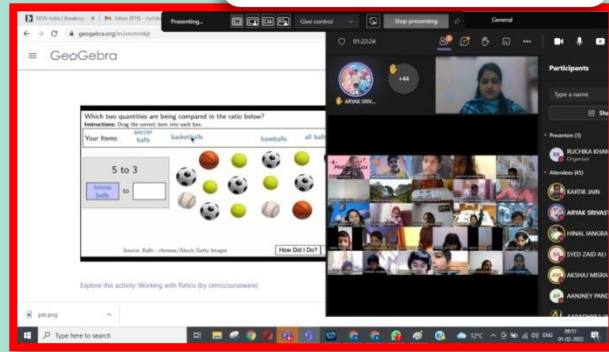
The calculator which is the most widely used mathematical device in today's world actually originated from the concept of an abacus.



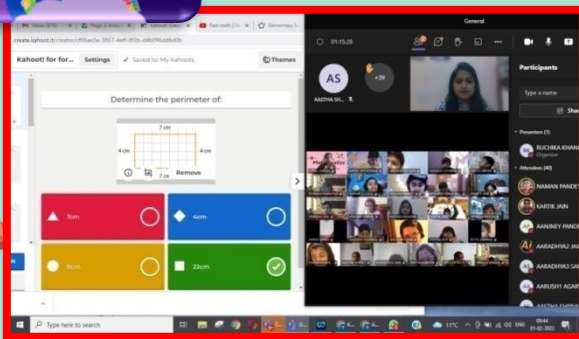
# READY FOR DIGITAL EDUVENTURES?

ADDING  
DIGITAL  
TOOLS

GeoGebra



Kahoot!



The effective use of digital learning tools in classrooms can increase student engagement, help teachers improve their lesson plans, and facilitate personalized learning. Technology provides students with easy-to-access information, accelerated learning, and fun opportunities to practice what they learn. It enables students to explore new subjects and deepen their understanding of difficult concepts

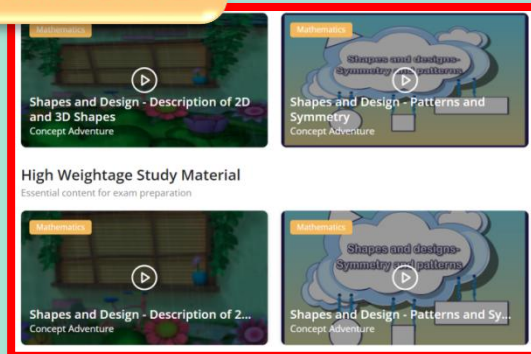
Math Games



LIVE  
LIVEWORKSHEETS



EXTRA  
MARKS

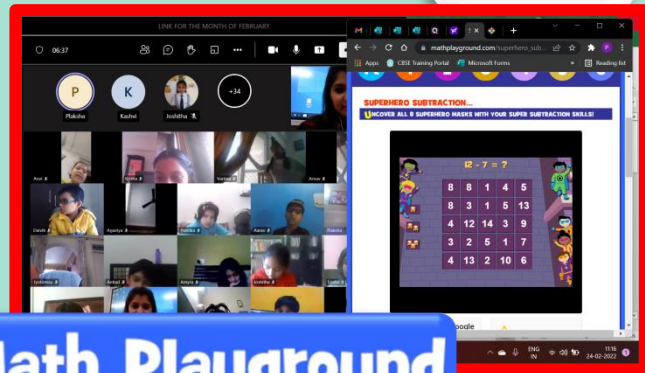
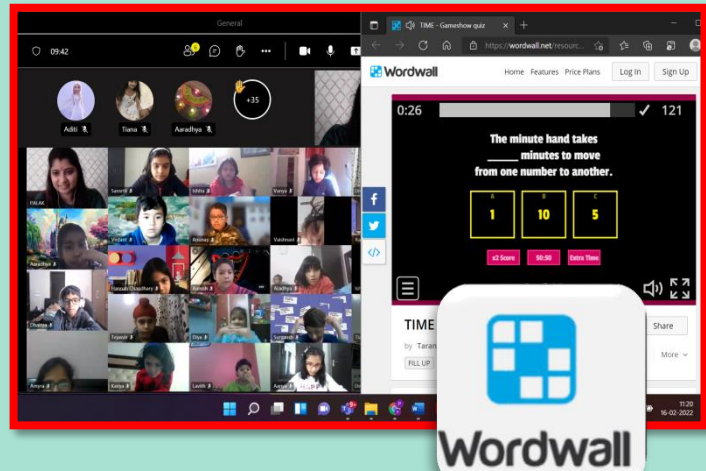
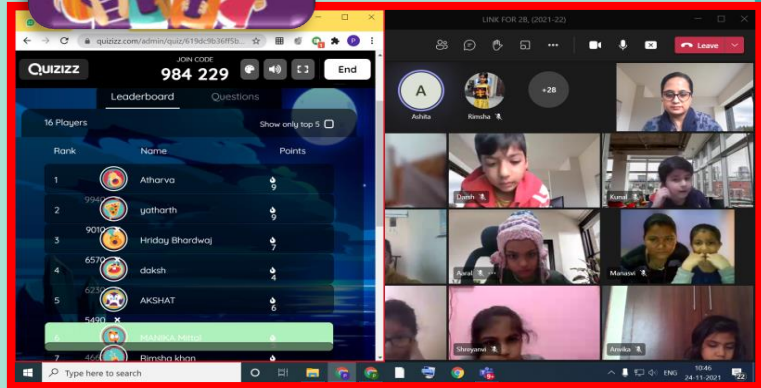


DIGITAL  
also means  
showing  
information  
using  
numbers.

# THE NEW NORMAL WITH DIGITALIZATION

MULTIPLYING  
THE FUN WITH  
GAMIFICATION

Since digital learning is far more interactive and memorable than voluminous textbooks or one-sided lectures, they provide better context, a greater sense of perspective, and more engaging activities than traditional education methods. This allows students to connect better with the learning material. Digital tools are also used for making learning fun with gamification of new concept as well as for evaluation. Keeping in mind, we do not refrain ourselves from enjoying with colourful and attractive worksheets. We love the digital world!



**Math Playground**  
Give your Brain a Workout



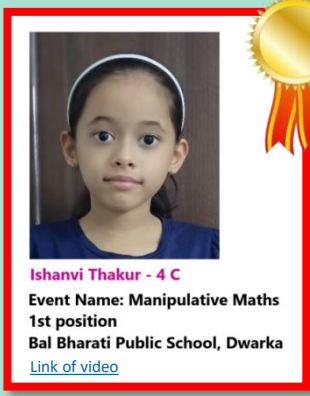
The gamification of maths happens when you identify where maths occurs in the world around you.



# “What people fear, we do it for fun” Woohooo! We did it again



Inter-school competitions are held on various topics, throughout the year involving several schools. These competitions give the younger generation a boost and raise their confidence while progressively developing a positive attitude towards competitions.



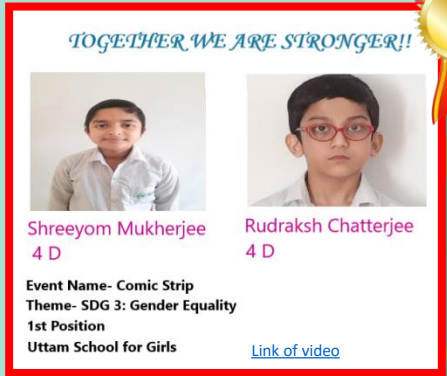
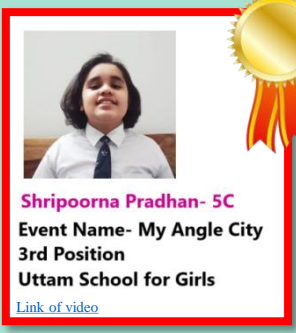
**Mission of Maths Competitions:**

- Encourage students to master their mathematical knowledge.
- Enhancing the abilities to understand mathematics.
- Help them understand how mathematics is applied in nature's laws and human activities.
- Develop their ability to derive pleasure and satisfaction through intellectual life.
- Show that mathematical education is significant in every part of the world.



Pure mathematics is, in its way, the poetry of logical ideas.  
— Albert Einstein

Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers.  
— Shakuntala Devi



**Maths Fun!**  
Why is the number six so scared?  
Because seven eight nine!



The spiral shapes of sunflowers, snails and shells follow the Fibonacci sequence, where the two previous numbers are added together to get the next (1, 2, 3, 5, 8, 13, 21, 34...)



# Be a STEMinist

PAVING THE WAY  
FOR YOUNG  
MATHEMATICIANS



## Aryabhata

**Bal Bharati PUBLIC SCHOOL**  
Sector-21, Noida, G.S. Nagar

**CONGRATULATIONS**  
TO ALL ARYABHATA WINNERS  
SCHOOL AVERAGE : 68.10

**WELL DONE**  
WELL DONE  
WELL DONE

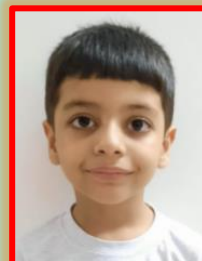
**Aryabhata Inter-School Mathematics Competition**  
SUMMER FIELDS School Noida

<b>DIVYANSH GUPTA</b>	<b>LAVANYA RAWAL</b>	<b>DHRUV GUPTA</b>
CLASS V D	CLASS V A	CLASS V D
RANK : 7	RANK : 10	RANK : 14
SCORE : 88	SCORE : 85	SCORE : 81

Aryabhata Inter-School Mathematics Competition was initiated by Summer Fields School, Kailash Colony, New Delhi in 1982 with the aim of exploring and sharpening the minds of Young Mathematicians. 10 students of class 5 took part in the competition with great zeal and enthusiasm.

## Matific Junior Maths Championship

The Junior Maths Championship is a friendly online maths competition for primary school students. The award-winning platform inspires children to do their best in maths with a friendly competition. The students completed fun, engaging maths activities to earn stars for themselves and their school.



**KAVYANSH TOMAR**  
CLASS 1 A

**NATIONAL**  
**RANK: 92**

**matific**

Among all shapes with the same perimeter a circle has the largest area



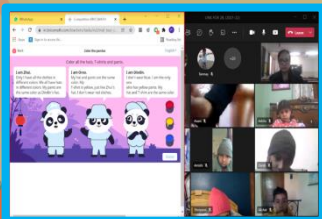
# "AND SO BRICSMATH LAID THE SOLID FOUNDATION"

ADDING  
LAURELS  
TO THE  
SCHOOL

BricsMath is an annual International Online Competition of Mathematics for students of class I- XII held in BRICS countries.



Bricsmath.com + is an Annual International Online Mathematics competition for the students of grades 1-12. The purpose of the competition is to develop interest in mathematics and develop logical reasoning. Around 1000 students of primary school participated in the competition.



## PERFECT SCORERS

S.NO.	CLASS	NAME OF THE STUDENT	NO. OF STUDENTS
1.	I	Kavyansh Tomar, Avyan Ali, Arohi Srivastava , Punav tendon , Shaurya Pathak , Danika Shukla, Kavya Verma, Divyansh Singh, Sansriti Jha	9
2.	II	Rishit Kumar, Ridhima sahu, Kaira Grover, Hezal Puri , Yatharth Gupta, Aarav Jain, Manika Gupta Mridul Gupta.	8
3.	III	Arsh Ansari, Anhad Monga, Ishika Verma, Navya Goel,	4
4.	IV	Asmi Aaral, Srishti Soni , Nimit Keswarani, Piyush , Veruksa Dhondhiyal ,	5
5.	V	Bhoomika Das, Vaibhav Verma, Satvik Sahoo, Aarvi ,	4



**YATHARTH GUPTA CLASS 2 B** got International Rank 82 out of 1,82,955 participants. He is among the top 1%.

2520 IS THE SMALLEST NUMBER THAT CAN EXACTLY BE DIVIDED BY ALL THE NUMBERS 1 TO 10.

# MATHS IS EVERYWHERE

INTEGRATION  
MULTIPLIES  
MATHS' FUN



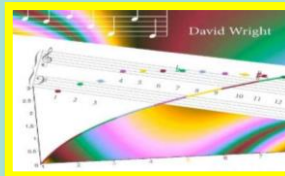
Mathematics is a fundamental part of human thought and logic, and is integral to understanding the world and ourselves. Curriculum integration is a growing trend in education. The integration of maths into other subjects makes students think about the "real world" which is a goal of the NCTM standards. It also makes students start to ponder over the cause of certain things happening, giving them a practical approach to learning and using mathematics.



## Maths & Dance

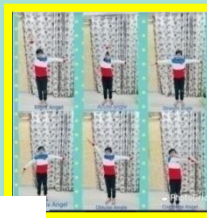
Dance in Primary School encourages flexibility in thinking, creativity, and perseverance. These are all necessary for building skills to practice mathematics efficiently. Different dance styles use Mathematics in different ways

Integrating Math with Dance: [Click Here](#)



## Maths & Music

Music enhances spatial-temporal reasoning skills, which are crucial for learning concepts in proportional reasoning and geometry. It's always fun when things fall into place, when the last piece of the puzzle fits and when a piece of music returns triumphantly to the tonic.



## Maths & Art

Art is the catalyst that provides students with a variety of hands-on experiences to practice skills that encourage understanding of new material and reinforce familiar mathematics concepts such as ratios through fractions, proportion and scale.



## Maths & Sport

Sports are an incredible past-time, one that many young students enjoy. Using various tutoring methods related to sports could be an interesting and effective way to introduce mathematical concepts to children who are struggling.



Link of Game designed by SOMAY GUPTA, CLASS VA  
[Link of the Game](#)

Can you solve this??

If  
 $1 = 2$   
 $2 = 8$   
 $3 = 18$   
 $4 = 32$   
 Then  
 $5 = ?$





# WE PLAY, WE LEARN, WE CUBE.

LIFE IS A  
PUZZLE LIKE  
RUBIK'S CUBE



**"The Cube is an imitation of life itself - or even an improvement on life." -ERNO RUBIK**

Life is a journey. You take the right step and it flourishes. This is quite similar to Rubik's Cube. If you know the right steps, then you are destined to become the champion. Rubik's cube help students in ways unimaginable. Students become problem solvers and creative thinkers.

It trains the brain to memorize and map things in order.

Bal Bharati Public School, Noida had taken great initiatives to induce the students to participate in Rubik's cube championships. During the session 2016-17, three students from our school showcased their competency in solving the RUBIK'S CUBE in less than a minute. They could also solve it blindfolded. Their expertise was greatly appreciated by the chief guest and Principal Madam, Ms. Asha Prabhakar. This paved the way to new beginnings towards a future filled with blessings, hope and accolades.

During the session 2017-18, girls from our school emerged as the winners in Reverberations. It was indeed, a remarkable achievement by our Girls Brigade. Seeing the growing rage amongst students in solving the cube in the shortest time span, a championship ( 1 min Challenge ) was announced by Principal Madam in the session 2018-19. To ride on the surging interest a Rubik's Cube Club was also introduced for the students of Primary wing during the session 2019-20. An outsourced faculty, Mr. Saiyyam Jain was appointed to conduct the classes on every first and third Saturday from 8:00 to 10:00 a.m.

**There are more than 100 types of Rubik's Cube**

**Regular shaped** (2X2X2, 3X3X3, 4X4X4, 5X5X5...)

**Odd shaped twisty cube**

**Software-based cubes**

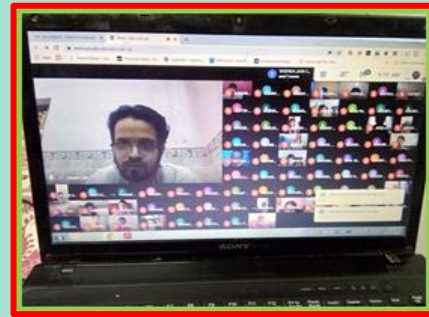
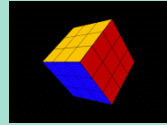
**Hybrid cubes**



Patrick Bossert aged 13, had published a book 'You Can Do the Cube' which has sold over 1.5 million copies.

# Am I really a Pandora's box? – Rubik's cube 🤔

WORLD RECORD  
- YUSHENG DU-  
3.47 SECS



Upholding the tradition of previous years, Mega Event RUBIK'S CUBE CHAMPIONSHIP the most awaited one, was conducted online during the session 2020-2021. The competition was a great success. With the array of activities and the zeal and enthusiasm students participated with, Rubik's Cube activities will be an ongoing saga wherein the students will revel in their sunshine.

## Rubik's Cube Championship (2021-22)

Rubik's cube championship was held on 5th March 2022. Mathematics' teachers shortlisted the students based on their prowess in solving the complete Rubik's Cube in category 1 and the ones solving it in less than one minute in category 2. 20 students from category 1 (class 1-2) and 49 students from category 2 (class 3 - 5) were selected for the Semi – Final Round which was held on 19th Feb 2022. Thereafter, top ten Semi Finalists from both the categories competed for the coveted Championship which was scheduled on 5th March 2022. The teachers wished them immense success for the upcoming opportunities.

	CATEGORY-1		CATEGORY-2	
2018-19	BHAV GUPTA (IB)	52 secs	PRARABD GAUTAM(VA)	27 secs
2019-20	SHRADDHA GOEL (IIB)	51 secs	ATHARAV SHARMA (VD)	17 secs
2020-21	PRAJVAL SAINI (IID)	42.9 secs	ADITYA RAJ (IVB)	13.4 secs

रुबिक क्यूब है बड़ा ही प्यारा, होता यह है बहुत निराला,  
आरनो रुबिक ने इसे बनाया, देखकर सबका सर चकराया ।  
यह है बहुत रंग बिरंगा इसके रंग हैं नीला,  
लाल हरा पीला, नारंगी और सफेद ।  
बड़े और बच्चों में यह ना करे भेद, एल्गोरिदम है इसकी भाषा,  
जल्दी से पूर्ण करने की है सबकी अभिलाषा ।  
आर प्राइम डी प्राइम का है खेल,  
घुमा घुमा कर बनता छ रंगों का मेल ।  
3 सेकंड में यशेग डू ने इसे बनाया,  
रुबिक क्यूब का चैंपियन कहलाया ।  
रुबिक क्यूब है सबसे प्यारा,  
मेरे मन को लगता है बहुत न्यारा !!!



आदित्य राज

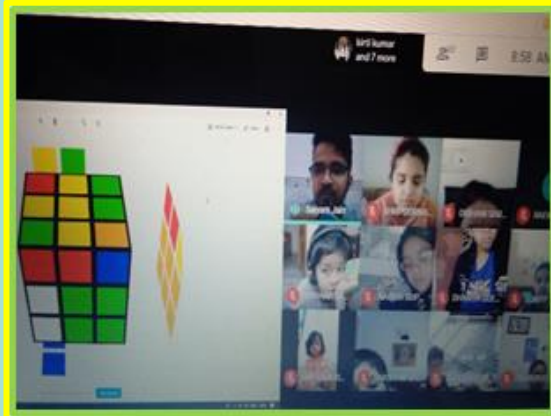
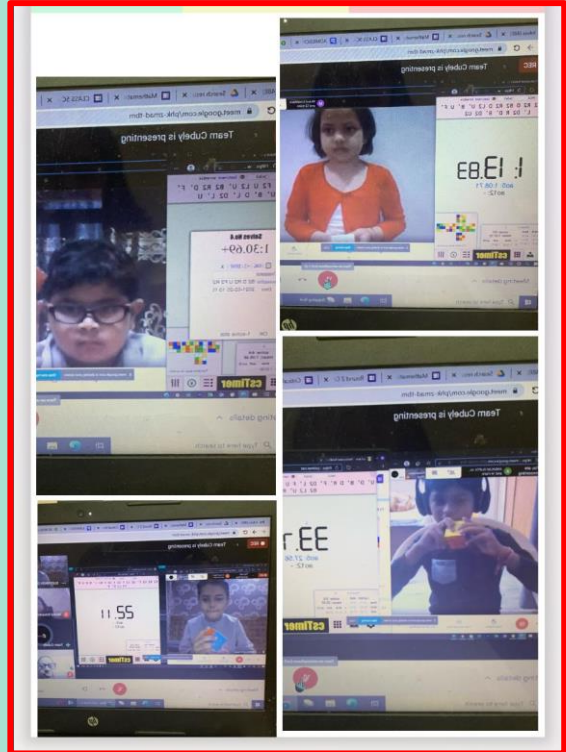
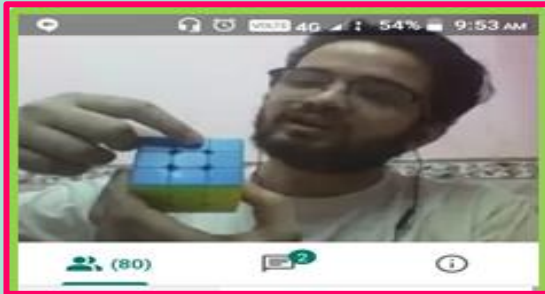
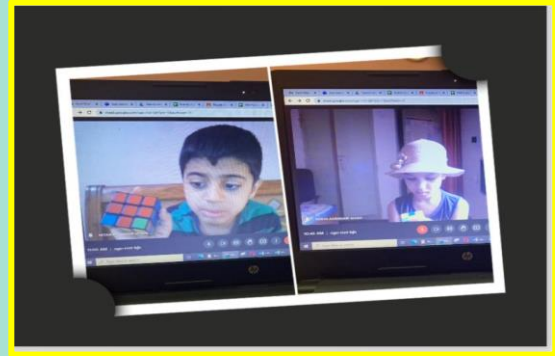
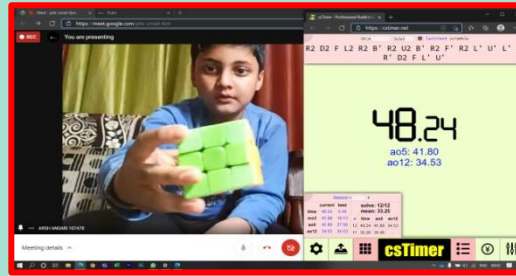
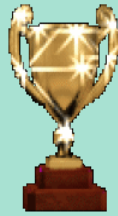
Robots  
can solve  
it in  
under one  
second.





# IT SEEMED IMPOSSIBLE UNTIL WE DID IT

JIGSAW PUZZLE -  
NOT PUZZLED  
ANYMORE



## Rubik's Cube Championships

2018-19

[Click here](#)

2020-21

[Click here](#)

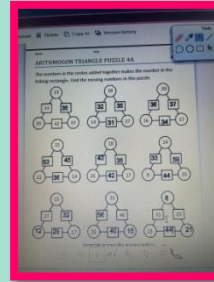
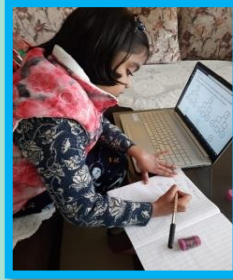


COSTLIEST  
CUBE IS  
MADE OF  
DIAMONDS  
PRICED AT  
2.5 MILLION  
DOLLARS

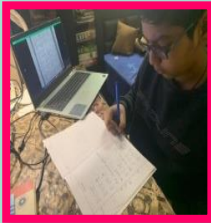


# CELEBRATING THE MAN WHO KNEW INFINITY - RAMANUJAN DAY

INFINITE  
LEARNING WITH  
SO MANY  
ACTIVITIES

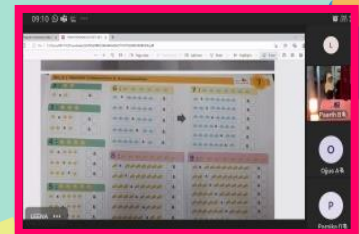


**Mathematics surrounds the universe. It makes our life orderly and prevents chaos. Ramanujan Day celebrated Mathematics in the most wonderful way where students were exposed to mathematics in fun way, knitted in various activities like crown making activity, Hop Hop, Triangular puzzles 123 etc.**



## SHIN PROGRAM- AN INDO-JAPANESE COLLABORATION

**Shin book of activities helped in enhancing the skills like budgeting, analysis, power of reasoning, critical thinking, problem solving and creativity. It also develops our abstract and spatial thinking. It promotes the fact that mathematics is not only about numbers, equations, computations or algorithms, but about understanding.**



**Magical  
Tribute by  
the students  
of Class 1 to  
the great  
mathematical  
wizard.**

[Click here](#)





# DIVING INTO THE WORLD OF STORIES

A MATHEMATICAL  
TALE



Stories spark student's curiosity, increases mathematical engagement and motivation.

Stories engage students in maths problems through a particular context.

Bal Bharati has introduced "Story telling in curriculum" for classes I to V where students learn different concepts through reading stories.

Students can engage their prior knowledge to support their learning of a mathematical concept.

By engaging in mathematical stories in a class, students get additional practice with problem-solving and critical thinking skills.



"Bibliosmia"

Love for the  
smell of old  
books.



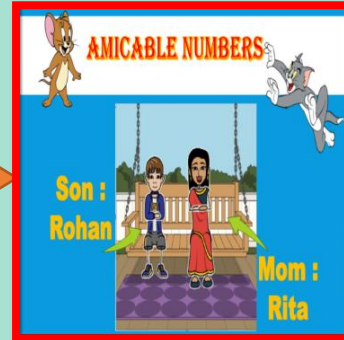
# AMICABLE US, -AMICABLE NUMBERS

MATHEMATICS  
ON COMICAL  
ADVENTURES

CONCEPTUALIZED, COMPOSED AND  
PRESENTED BY:  
MS MUKUL SRIVASTAVA  
MS PALAK GOEL



[Click here](#) to read  
comic book made by  
Ms. Palak and Ms.  
Mukul



Comics provide narrative experiences for students just beginning to read and for students acquiring new language. Students follow story 's beginnings and endings, plot, characters, time and setting, sequencing without needing sophisticated word decoding skills. Images support the text and give students significant contextual clues to word meaning.

Comics act as a scaffold to student's understanding.

Also, according to Cary, comics motivate reluctant readers. They engage students in a literary format which is their own.

The first comic book in the United States was "The Adventures of Mr. Obadiah Oldbuck," in 1842.



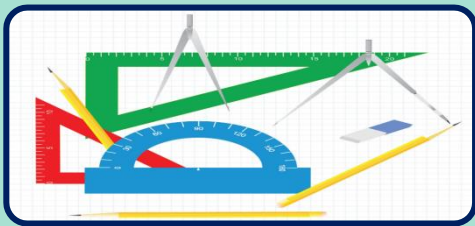
# ROOM FOR ERRORS, NOT AVAILABLE

ERROR 404 –  
NOT FOUND



## 2. Writing Fractions

Help by presenting fractions to your child in a fun way. Use images and descriptions that are common to them such as pizza slices to show that  $\frac{2}{4}$  is "2 out of 4 pieces",  $\frac{1}{2}$  is "1 out of 2 pieces".

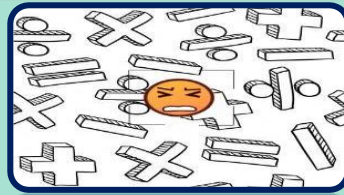


## 4. Using Mathematical Tools

Keep an eye on your child when they are just starting to learn the use of a mathematical tool.

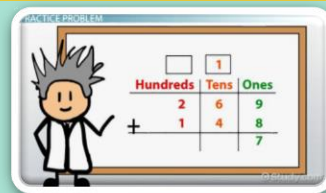
## 5. Multiplication with Two-Digit Numbers

When practising or correcting the mistakes with your child, remember that there are many steps involved in a single multiple-digit working. Go through each step with him or her carefully and stop when you notice where the error was made. With repeated practice, your child will be more comfortable handling these questions and reduce errors made.



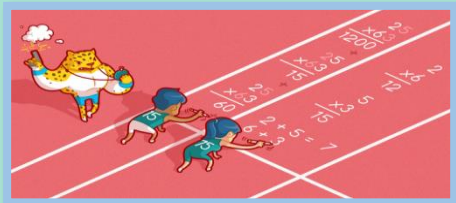
## 1. Using the Wrong Symbols

Go through the different symbols with your child, ensuring that he or she is able to recognise each one before moving to the next symbol. Minimize the use of wrong symbols by making sure your child writes all lines of work; trying to skip a step can result in confusion and errors.



## 3. Adding Multiple Numbers

Get your child to practice applying small numbers to the mathematical function, be it addition, subtraction, or multiplication. Ensure that they understand the concepts needed for a variety of numbers. Use daily objects such as coins as a visual to help them grasp the concept



A Mathematical Mistake Led to Discovery of the New World USA- Columbus thought Japan is 3000 miles from Spain whereas it actually is 12000 miles.

# RIDDLES / PUZZLES CORNER

DON'T BE  
PUZZLED BY  
PUZZLES!!!



MATH may not teach us  
how to **ADD** love  
or **SUBTRACT** hate  
but it gives us hope  
that **EVERY PROBLEM**  
has a **SOLUTION**.



1. If there are four apples and you take away three, how many do you have?

2. What's the maximum number of times you can subtract five from 25?

3. I add five to nine and get two. The answer is correct, but how?

4. How can you add eight 4 together so the total adds up to 500?

5. If four men can build four tables in four hours, how many can eight men build in eight hours?

6. If you go to the movies and you're paying, is it cheaper to take one friend to the movies twice or two friends to the movies at the same time?

7. Add one line to make it fine!

9:50 = 10 10 10

9. It is given, 1=3, 2=3, 4=4, 5=4, 6=3, 7=5, 8=5, 9=4, 10=3, 11=?, 12= ?

Find out the missing numbers?

8. 27 hens were marching towards the farm. 5 of them lost their way, 13 hens returned, and 9 hens finally reached the farm. What happened to the remaining hens?

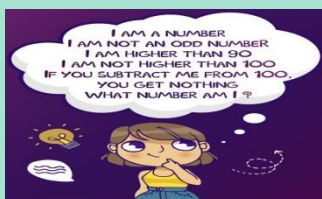
11. How many eggs can you put in an empty basket of 2m x 2m size?

10. How many sides are there in a circle?

13. If seven people meet each other and each one shakes hand only once with the others, how many handshakes did actually happen?

12. A triangle and a circle are friends. What did the triangle say to the circle?

14. Which three times a number is larger than two times that same number?



1) 3, 2) 1, 3) 9:00+5 HOURS=2:00, 4) 444+44+4+4+4=500  
5) 16 tables, 6) Two friends 7) 9:50=10 TO 10 8) None,  
9) 6 i.e. No. of alphabets in name, 10) 2- Inside and Outside, 11) Once, then its not  
empty, 12) You are pointless, 13) SEVEN, 14) 0

If you shuffle a pack of cards properly, there's a good chance that the exact order of the cards you have in your hands has never been seen in the history of the universe.





# GRATITUDE



We presented you the spectrum of thoughts, ideas and creativity capturing the present and past situation through the use of technology. As we keep advancing with time, we'll make sure to keep ourselves technologically advanced by leveraging the tools and software available. We thank our dignitaries to have their unstinted faith in us. Your support, guidance and trust in us, made us see all the talent present within ourselves. We thank all the team members who contributed generously to this newsletter. Mistakes allow thinking to happen, till then keep learning, brainstorming and practicing your mathematical skills. Time to fly to greater heights!!!