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

Circular No.119/2024-25 Date: 18 Dec, 2024

# NATIONAL MATHEMATICS DAY 2024

Dear Parents,

In India, National Mathematics Day is observed on December 22 every year. It is celebrated to honor the birth anniversary of Sir Srinivasa Ramanujan, a world-famous Mathematician who made remarkable contributions in different fields and branches of Mathematics. With an objective to pay tribute to the legendary mathematician and spread the joy of learning and understanding of Mathematics, Bal Bharati Public School, Noida is conducting a Special Activity Day on 23.12.24. We shall have class-wise fun-filled Mathematical Activities. The activities are basically intended to develop the application of knowledge and analytical skills of students in the field of mathematics.


Following activities have been planned to celebrate National Mathematics Day on Monday 23.12.2024, under the supervision of subject teachers.

| SR. NO. | ACTIVITY | CLASS | TEACHER IN-CHARGE | MATERIAL REQUIRED | DESCRIPTION | LEARNING OUTCOME |
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| 1 | Basketball Blitz | III | Ms Minakshi J, Ms Kanika P | Basketball hoops made with paper cups, Ping-pong ball/ pom-pom ball, Paper slips with maths problems, Stopwatch / timer, Scoreboard | **Rules:** The class will be divided into small teams (4-5 students per team). A member from each team will pick up a slip with a math problem inside it. The student has to solve the problem within a specified time of 1min. If the answer is correct, the student gets a chance to shoot the basket with a pom-pom ball or a ping-pong ball.<br>**Scoring:** Each correct answer earns the team 1 point. If the student makes the basket, they earn additional points (mentioned on the basket) for their team.<br>**Bonus Round:** In the last round, double the points for both solving the problem and making the shot, to increase excitement. | 1) Practice basic arithmetic operations such as addition, subtraction, and multiplication.<br>2) Improve mental Math abilities by solving problems under time constraints.<br>3) Develop teamwork skills and collaboration.<br>4) Improve hand - eye coordination and motor skills through basketball shooting.<br>5) Understand how Math can be applied in a real-world context.<br>  |
| 2. | Perimeter Play-Off: Fair Court Analysis | IV | Ms. AnkitaT and Mansi T. | Inch-tape and a notebook | In this engaging Math activity, the class will be divided into two teams to measure the perimeter of each half of the school basketball court. Equipped with measuring tapes, each group will calculate the perimeter of their assigned half. Afterward, the teams will compare their results to analyze whether both halves have the same | Accurately measure and calculate the perimeter of the basketball court.<br>Practice using measuring tapes and other tools for real- world measurements<br>Understand how geometry affects fairness in sports.<br>Work together in teams to collect data and solve problems |

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| | | | | | perimeter or if there is a discrepancy. If differences are found, the students will discuss how it could impact the fairness of the game and brainstorm possible solutions. This activity blends geometry with critical thinking and real-world problem-solving!<br>Afterward, the groups will combine their results to determine the full perimeter of the court. |  |
| 3 | Hopping on the Number Line | V | Ms.Ruchika K, Ms.Anita | 1.Coloured Tape<br>2. RIbbon 4-5 metres (any colour) | The "Hopping on the Number Line" activity uses a ribbon as a number line marked with numbers.<br>Students solve addition, subtraction, multiplication, and division problems by physically hopping to the correct positions, making math interactive, fun, and engaging while enhancing their understanding of<br>  | 1) Understand and apply number operations.<br>2) Perform addition, subtraction, multiplication, and division using a number line.<br>3) Enhance motor skills and spatial awareness.<br>4) Improve problem-solving and critical thinking.<br>6) Foster teamwork and collaboration.<br>7) Boost confidence in Math through fun activities. |
| 4 | Angle Artistry- Fun with Protractor | VI | Ms. Subha | 1.A4 size paper or thick chart paper (for durability)<br>2.Ruler (scale)<br>3.Compass (for drawing arcs)<br>4.Pencil and eraser<br>5. Crayons<br>Scissors<br>Colored pens | Students will be making colourful paper protractor using the given materials. This activity will help the students to learn how to make a simple protractor using paper cut-outs. It also helps students to visualize and understand angles, degrees, and the structure of a protractor. This activity is simple, creative, and gives students a sense of accomplishment as they make a real, functional protractor. | Students will learn how to measure and construct angles.They will understand the structure and function of a protractor.It develops fine motor skills, spatial awareness, creativity and geometry concepts.<br>  |
| 5 | Pythagoras in Action: A Cardboard Geometry Experiment | VII | Ms Namrta K | Card Board, Colourful sheet, Glue, scissors, and geometry box. | This hands-on activity uses cardboard shapes to visually demonstrate and prove the Pythagoras Theorem by showing that the areas of the squares on the two shorter sides of a right-angled triangle equal the area of the square on the hypotenuse.<br>Pythagoras' theorem and proof (cut-out demo) - YouTube<br>  | Students will understand the Pythagoras Theorem conceptually and visually.<br>They will enhance their skills in measurement, geometry, and logical reasoning.<br>The hands-on activity makes abstract math more concrete and engaging. |

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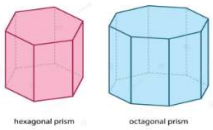
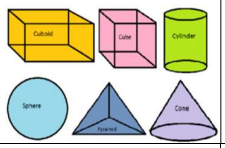
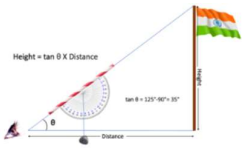
| 6 | Transforming Cartons: Geometry in 3D Shapes | VIII | Mr Anshul Dubey | Cuboidal packing Box(Exa: Box of tooth paste), Colourful sheet, Glue, scissors and geometry box. | Using old toothpaste cartons and boxes with square cross-sections, you can create amazing 3D shapes like cubical boxes, hexagonal boxes, and octagonal boxes by creatively folding, cutting, and assembling them.<br>  <br><br>3-D SHAPES - ENGLISH - 37MB - YouTube | Students will understand the properties of 3D geometric shapes such as cubes, hexagons, and octagons.<br><br>They will develop skills in measurement, cutting, and assembling to create models.<br><br>The activity will foster creativity, resourcefulness, and spatial reasoning by repurposing everyday materials. |
| 7 | Maths Modeling | IX | Mr Anoop Dixit & Mr Sanjay D | 1.Inch tape.<br>2.Weighing scale.<br>3.24 × 24-inch iron frame with 1-inch-wide strips.<br>4..Eight iron bars incorporated within the frame.<br>5.Circular rings (4-5 inches diameter).<br>6.Models of solid Bodies like cylinder; cone etc. | 1.The construction industry is a cornerstone of human civilization, responsible for creating safe and durable environments. However, unethical practices, such as substituting substandard materials, have emerged as a significant issue, particularly in the fabrication of windows and grills. This malpractice compromises structural integrity, endangers occupant safety, and undermines trust in Contractors.<br><br>2. Concept of volume and surface area of regular and irregular solids.<br>  <br> | This activity represents a significant step toward transparency in the construction industry. By empowering consumers with scientific tools for evaluating material quality and costs, the project addresses a pressing societal issue. Its impact spans<br><br>safety, economic fairness, and trust, laying the foundation for ethical construction practices. With future advancements and expansions, This activity has the potential to set new benchmarks in the global construction sector. Our idea is not limited to only window frames but it has a broader application i.e. it is applicable to all physical constructions which involves steel or other metals. |
| 8 | Trigonometry in Daily Life | X | Mr Vipin Kumar | Clinometer, Measuring Tape, Trigonometry Table | A clinometer is a tool that employs a spirit or bubble level to gauge the angles of slopes or elevations in relation to gravity. Depending on the specific model in use, it might include multiple printed scales, enabling measurements of angles up to go degrees from the horizontal axis. The spirit level incorporates a needle that signifies whether an angle is ascending or descending concerning the horizontal axis. | This activity not only reinforce the concept of Height and Distances, measuring angles but also encourage critical thinking.<br>  <br> |

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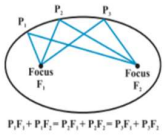
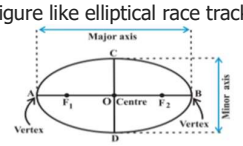
| 9 | Application of Coodinate Geometry in Sports/Real Life Situation | XI | Mr Sanjay Dua & Birender Sahu | 1.Tape measure<br>2. String or rope<br>3.Two stakes (orpoles)<br>4.Chalk, marking powder<br>5.Hammer | Drawing a perfect elliptical race track on the ground can be done systematically with the help of mathematical concept of locus of point with respect to ellipse.<br>  <br><br>Fig. 1 | Upon completing this activity, students will be able to understand the concepts of locus of a point belonging to coordinate geometry<br>Chapter straight line and conic section.<br>Also they will be able to draw the perfect ellipse/ elliptical figure like elliptical race track.<br>  <br><br>Fig. 2 |

Asha Prabhakar
(Principal)
Kindness, Resilience, Respect

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