D.A.V. PUBLIC SCHOOL, THANE
SECONDARY SECTION
SESSION: 2026 – 2027

CLUB ACTIVITY - ARYABHATA CLUB

Ref: D.A.V/Thane/2026-27/Cir-44

"Mathematics is the elegant art of patterns, the reasoning of ideas, and the universal language through which we explore, understand, and shape the universe."

Get ready to explore the magic of Mathematics with fun, creativity, and challenges!

The Aryabhata Club is pleased to announce its list of activities for students of Std. VI–X.

COMMON ACTIVITIES (Compulsory for all Std. VI–X)

- **ACTIVITY 1:** ***Sum of the Day*** – Solve, learn, and shine every day.
- **ACTIVITY 2:** ***Brainy Bites*** – ***Quick Mental Math Quiz to challenge your thinking.***

STD X

ACTIVITY 3: INDIVIDUAL ACTIVITY

1. **Mind Map / Concept Map**: Prepare a Mind Map/Concept Map on the given topic to organise, connect, and present its important concepts, definitions, formulae, properties, and applications in a clear, creative, and systematic manner.

S. No.	Rubrics for Assessment
1	Accuracy of mathematical concepts, definitions and formulae
2	Logical organisation and connections between concepts
3	Creativity and visual appeal
4	Neatness and presentation
5	Submission on time

2. **Clinometer**: Construct a simple **clinometer** using easily available materials and use it to measure the **angle of elevation** of a tall or inaccessible object. Using the measured angle and the known distance from the object, apply appropriate **trigonometric ratios** to determine its height. Also, demonstrate the practical application of **Trigonometry and Heights and Distances** in real-life situations.

S. No.	Rubrics for Assessment
1	Construction and functionality of the clinometer
2	Accuracy of angle and distance measurements
3	Correct application of trigonometric ratios and calculations
4	Recording observations and explaining real-life applications
5	Neatness and timely submission

STD IX

ACTIVITY 3: INDIVIDUAL ACTIVITY

1. **Kaushal Bodh Activity- Class Survey: Hygiene and Health Indicators**: Conduct a class survey using a simple questionnaire focusing on: **Daily water intake**, **Weekly physical activity, Daily exercise etc**. Collect and organise the data, prepare **grouped frequency tables**, and represent the findings using **histograms** with appropriate labels and scales. Analyse the graphs and record brief observations and conclusions based on the collected data.

S. No.	Rubrics for Assessment
1	Relevance of survey questions and accuracy of data collection
2	Correct preparation of grouped frequency tables
3	Accuracy of histogram, labels and scale
4	Analysis of data, observations and conclusions
5	Neatness and timely submission

2. **Wheel of Theodorus – Square Root Spiral:** Design and construct the **Wheel of Theodorus (Square Root Spiral)** as a creative mathematical model to visualise square roots and explore their geometric representation.

S. No.	Rubrics for Assessment
1	Mathematical accuracy of the square root spiral
2	Correct construction using geometric tools
3	Accuracy of measurements and geometric representation
4	Creativity, neatness and presentation
5	Submission on time

OR

Indian Mathematician – Creative Infographic: "Design and create an Infographic on any Indian mathematician, highlighting their life, significant contributions, and impact on the field of mathematics."

S. No.	Rubrics for Assessment
1	Accuracy of biographical information
2	Relevance and explanation of mathematical contributions
3	Organisation and clarity of information
4	Creativity, neatness and visual presentation
5	Submission on time

STD VIII

ACTIVITY 3: INDIVIDUAL ACTIVITY

1. **Kaushal Bodh Activity- Home Hygiene**: Observe and record household hygiene indicators such as the cleanliness of rooms and kitchen, availability of soap and clean water, proper waste segregation and disposal, cleanliness of bathrooms, and handwashing practices among family members. Organise the collected data using tally and frequency tables and represent it through a bar graph or pie chart. Analyse the data to identify key hygiene concerns and suggest practical solutions. Prepare a Home Hygiene Improvement Report that includes the collected data, graphical representation, findings, and three evidence-based suggestions for maintaining a cleaner, healthier, and more hygienic home.

S. No.	Rubrics for Assessment
1	Relevance and accuracy of household hygiene observations
2	Correct preparation of tally and frequency tables
3	Accuracy of bar graph or pie chart
4	Findings and three practical, evidence-based suggestions
5	Neatness and timely submission

2. **3-D Models Using Nets**: Construct 3-D models of a **prism/pyramid** using their nets.

S. No.	Rubrics for Assessment
1	Accuracy of the net and geometric structure
2	Correct construction and assembly of the 3-D model
3	Accuracy of dimensions and shape
4	Neatness, stability and creativity
5	Submission on time

OR

Mandala and Warli Art: Explore and create a mathematical artwork inspired by **Mandala or Warli Art**, highlighting geometric shapes, patterns, symmetry, and mathematical elements.

S. No.	Rubrics for Assessment
1	Use of geometric shapes and patterns
2	Demonstration of symmetry and repetition
3	Mathematical accuracy and relevance
4	Creativity, neatness and presentation
5	Submission on time

OR

Analyse Actual Cash Bills to Verify GST on Food, Clothing and Grocery Items: Collect suitable cash bills for food items, clothing and grocery products. Identify the GST percentage and GST amount charged on each item. Verify the calculations using the applicable GST rates, compare the rates across different categories, and present your observations systematically using tables, calculations and a brief conclusion.

S. No.	Rubrics for Assessment
1	Collection and categorisation of suitable cash bills
2	Correct identification of applicable GST rates
3	Accuracy of GST calculations and verification
4	Comparison of rates, observations and conclusion
5	Neatness and timely submission

STD VII

ACTIVITY 3: INDIVIDUAL ACTIVITY

1. **Kaushal Bodh Activity- "My Family Health Book"**

Prepare a health record table for any five members of your family. Collect and record their age , height and weight in the table. Then-

a) Calculate BMI of each family member.

b) Compare their height and weight using a double bar graph.

c) Mention one healthy habit the family should improve.

S. No.	Rubrics for Assessment
1	Organisation and completeness of the health record table
2	Accuracy of BMI calculations and appropriate interpretation
3	Accuracy of double bar graph, labels and scale
4	Identification of a healthy habit and meaningful observation
5	Neatness and timely submission

2. **Nets of 3-D Solid Figures**: Create the nets of any 3-D solid figures of your choice (cube, cuboid, cone, etc)

S. No.	Rubrics for Assessment
1	Accuracy of nets and geometric shapes
2	Correct dimensions and arrangement of faces
3	Correct folding and assembly, wherever applicable
4	Neatness, precision and presentation
5	Submission on time

OR

Tangram Puzzle: Create a Tangram Puzzle using 7 geometric pieces. Cut the pieces neatly from a coloured sheet or chart paper. Arrange the pieces to create a figure such as an animal, bird, person, or object. Paste the completed figure neatly on an A4 sheet paper.

S. No.	Rubrics for Assessment
1	Accuracy of the seven geometric pieces
2	Correct arrangement to create a recognisable figure
3	Creativity and originality of the design
4	Neat cutting, pasting and presentation
5	Submission on time

STD VI

ACTIVITY 3: INDIVIDUAL ACTIVITY

1. **Kaushal Bodh activity- "My Balanced Diet Plate:."**: Prepare a real balanced diet plate at home using cereals, pulses, fruits, vegetables and dairy products. Capture a photograph of the prepared plate and paste it on an A4 sheet. Label each food group and represent its portion using fractions and percentages. Calculate the cost of each food group using assumed prices and find the total cost of the meal. Present all mathematical calculations neatly on the sheet.

S. No.	Rubrics for Assessment
1	Representation and labelling of food groups
2	Correct use of fractions and percentages
3	Accuracy of assumed prices and total cost calculations
4	Creativity, inclusion of a real balanced diet plate and health message
5	Neatness and timely submission

2. **Design a House Using Line Segments**: Design a house using only line segments. Label at least 10 segments and mention their lengths with different colours.

S. No.	Rubrics for Assessment
1	Correct use and labelling of at least 10 line segments
2	Accuracy of the stated lengths
3	Appropriate use of colours to distinguish segments
4	Creativity, neatness and overall design
5	Submission on time

OR

Role Play / Story on Triangles: Role play/ Story to demonstrate the types of triangles and elements.

S. No.	Rubrics for Assessment
1	Mathematical accuracy about types and elements of triangles
2	Clarity of explanation and storyline
3	Creativity and engagement
4	Presentation, expression and preparedness
5	Performance/submission on time

OR

Mathematics in a Recipe: Prepare a display board or 3-D recipe model using a simple recipe such as fruit salad, lemonade, sandwich, or fruit juice. Show the ingredient ratios and calculate the new quantities when the recipe is doubled or halved.

S. No.	Rubrics for Assessment
1	Correct representation of ingredients and ratios
2	Accuracy of calculations when doubling or halving quantities
3	Mathematical relevance and clarity of the display/model
4	Creativity, neatness and presentation
5	Submission on time

Warm Regards

Mrs. Mukta Baurai

Headmistress