

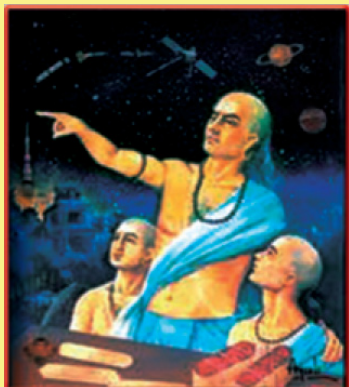


Aryabhata Science Centre

Assam Science Technology and Environment Council

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Editorial



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In the world of space exploration, success is often measured in small but significant steps. India, with its Chandrayaan-3 mission, has recently taken one such stride, marking a triumphant return to the lunar frontier. This editorial note celebrates the remarkable success of Chandrayaan-3 and its profound implications for the nation and the global space community. Chandrayaan-3, the third lunar mission by the Indian Space Research Organisation (ISRO), was launched with high expectations, building on the lessons learned from its predecessors, Chandrayaan-1 and Chandrayaan-2. The mission aimed to achieve a soft landing on the Moon's surface, a challenging feat that had eluded India in its previous attempt. The success of Chandrayaan-3 in achieving this milestone is a testament to India's perseverance and technical prowess. This success represents several critical achievements. First and foremost, it affirms India's growing expertise in space technology and lunar exploration. It demonstrates ISRO's capacity to learn from past failures and apply that knowledge to create a mission that could surpass the expectations set by its predecessors.

The success of Chandrayaan-3 also signifies India's commitment to expanding its presence in space. With each successful lunar mission, India solidifies its position as a major player in the global space community. The nation's willingness to take on complex missions showcases its determination to advance scientific research and technological capabilities. Moreover, this accomplishment serves as an inspiration for budding scientists, engineers, and innovators in India. Chandrayaan-3's success sends a powerful message that with determination and resilience, even the most challenging goals can be achieved. It encourages the next generation to dream big, pursue careers in space science and technology, and contribute to humanity's collective knowledge. The success of Chandrayaan-3 is a proud moment for India and a cause for celebration in the global space community. It demonstrates the nation's dedication to space exploration, its capacity for learning and innovation, and its ability to inspire the world. As India continues to make strides in lunar and planetary research, it is sure to contribute significantly to our understanding of the cosmos. Chandrayaan-3's achievement is a reminder that the sky is not the limit, but merely the beginning of our journey into the great unknown.

India's ambitious lunar exploration mission Chandrayaan-3, has garnered significant interest and support from various regions, including Assam. The Aryabhata Science Center in Assam has played a crucial role in fostering scientific curiosity and knowledge among the local population. As Chandrayaan-3 aims to build upon the successes of its predecessors, the science center in Assam serves as a hub for educational outreach and awareness programs related to space exploration. It not only highlights the achievements of the ISRO, but also encourages the youth of Assam to take an active interest in space science and technology. The collaborative spirit between Chandrayaan-3 and institutions like the Aryabhata Science Center in Assam underscores the nationwide enthusiasm and support for India's space endeavors, promoting a scientific temperament and a sense of pride in the country's achievements in space exploration.

Dr. Jaideep Baruah
Director, ASTEC

Disctrict Level Activities of ASC, Chirang District, 2023

By: Thomas Basumatary, District Co-ordinator, ASC, Chirang

1) **National Mathematics Day:** 22nd December 2022 National Mathematics Day Celebration hold in the premise of Mongolian High School, Chirang. In this connection Aryabhata Science Centre, Chirang District organized quiz competition among the school student and a Mathematical discussion and model demonstration hold by Mr. Ram Saha.

2) **National Science Day:** 28 February 2023 celebration of National Science day hold in the premise of Mongolian High School, Chirang. In this connection a science model competition and science based quiz competition organized. After the competition a science awareness meeting held and in this day a science worker Mr. Nandalal Basumatary from NGO - ANT Rowmari delivered a brought speech about science day among the students. Chirang district co-ordinator felicitated the Chief guest with a Aronai.

3) Night Sky observation holds on 02-08-2023 at Tukrajhar Higher Secondary School, Chirang.

4) Chandrayaan 3 Landing observation holds on 23-08-2023 at Koila Moila High School, Chirang.



Disctrict Level Activities of ASC, Kokrajhar District, 2023

By: Chakramani Brahma, District Coordinats, ASC

13th April, 2023: Organised an awareness on Environment and Forest in the premises of Kokrajhar Girls' H.S. School. In this connection Essay writing and Quiz as well as some games on corelation of Flora and Fauna also organised.

25th& 26th April, 2023: Organised Science Terminology Workshop in Bodo language in collaboration with Vigyan Prasar and Assam Science Society, Kokrajhar Branch.

6th May, 2023: Supported a programme awareness campaign on Drug Abuse, organised by Dept. of Education, BTC in the premises of Kokrajhar Girls' H.S. School. Dr. Bihung Brahma, Asstt. Prof., CIT, Kokrajhar act as Resource Person and explained about the ill effect of drugs through slides.



SMART DUSTBIN

Made by- Dhrubajyoti Baishya (Ex-ASC Participant)

Supervisor - Dr. Ranjit Baishya, District Coordinator ASC, Kamrup

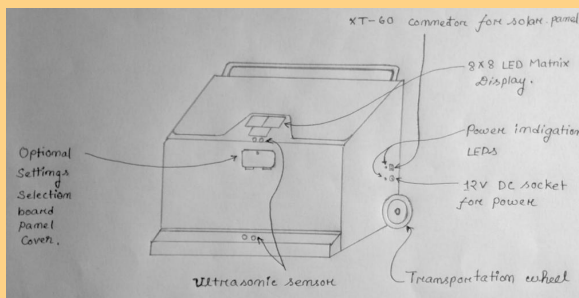
Features of The Dustbin:

- Vibration to reduce the size of garbage (with adjustable knob).
- Automated lid.
- % of garbage displayed on dustbin screen.
- 10% space available buzzer (warning).
- 10% space available SMS (warning).
- Day-ON/Night-OFF system (with RTC module).
- Solar + Adapter powered.
- Smiley emoji is displayed on screen after disposal of garbage (For make the dustbin user friendly).
- Lid lock while not use (Solenoid lock).
- False trigger avoid system (can be enable or disable by optional settings selection board).
- Easy to carry like travel bag (with the help of transportation wheel fitted on the dustbin).
- Dust proof lid.
- Date-Hour-Minute display on 3rd matrix display.
- Manual open/close switch in case of technical issue (through optional settings selection board)

Methodology:

- 1) When somebody comes near to the dustbin the ultrasonic sensor sense it, & gives a signal to the microcontroller.
- 2) Then microcontroller send a 2 millisecond square wave to the servo (modified for heavy load), after getting the signal the servo open the lid until the person go.
- 3) After completion of garbage disposal process the lid locked automatically, and vibration starts to reduce the space occupy by the garbage.
- 4) When the lid has locked, a smiley face appears on the display to make the dustbin user friendly. After that "Thank You" message scrolled on 3rd display.
- 5) When the dustbin is not used, then percentage of non-biodegradable & biodegradable garbage is displayed on 1st and 2nd display respectively.
- 6) The dustbin stops all operation in night & starts in day with the help of RTC module.
- 7) When the garbage reaches 90% space of the dustbin a warning alarm starts ring simultaneously a SMS send to the operator (the warning alarm can be disable through optional settings selection board)

Block Diagram of The Dustbin:



Block Level Activities of ASC, Majuli Block, Majuli District

The Block Level Activities of Aryabhata Science Centre, Majuli Block was organised on 29th April 2023 at Milon Jyoti High School, Totoya Majuli with a daylong programme. The programme was started with registration of participants from various schools within the block at 8:00 am - 9:00 am and Plantation programme was conducted from 9:00 am to 9:30 am by Debobrata Khanikar, Range Forest Officer, Majuli. The competitions like Science based Poster Making, Science based drawing Competition, Science based Idea Competition, Science based Extempore Speech hold in parallel mode from 9:30 am - 12:30 pm. Dr. Arup Bura Gohain Assistant Prof. of Zoology, Majuli College, Dr. Debajyoti Bhattacharjya, Assistant Prof. of Chemistry, Majuli College, Dr. Aditya Borah, Assistant Prof. of Chemistry, Jengraimukh College, Basanta Borah, BRP SSA, Dipu Borah, Principal, Rupbarn Art School, Sunil Kumar Borah, Science Teacher, Ratanpur High School, Naba Jyoti Saikia, Science Teacher, Kamalabari Academy High School, Trinyan Neog, attended as evaluators. The prize distribution and valedictory session was started from afternoon 2:00 pm - 3:00 pm. The session was presided by Mr. Brajen Kalita, Headmaster, Milon Jyoti High School, Totoya. The inaugural speech was delivered by Mr. Reba Borah, Retd. Headmaster, Milon Jyoti High School. The programme attended by Dr. Anup Kumar Doley, District Coordinator, Aryabhata Science Centre, Majuli District cum Assistant Prof. of Majuli College, Miss Chimi Rekha Gogoi, Assistant Prof. of Chemistry, Jengraimukh College, Mr. Jiban Borah, District Coordinator, NCSC, Majuli District, as invited guests, Resources Person respectively. Prizes were distributed among the winners. The vote of thanks was delivered by Mr. Bikash Borah, Block Coordinator, Majuli Block Aryabhata Science Centre, Majuli, Assam.

BLOCK LEVEL ACTIVITIES OF ASC PASCHIM NALBARI BLOCK, NALBARI

Aryabhata Science centre, Paschim Nalbari Block, Nalbari district organized Block level Science based Model Making, Extempore Speech, Postcard Drawing and Idea competition on 17th may 2023(Wednesday) with day long colourful programme in the premises of Milan High School, Panigaon. The programme was inaugurated by Sri Simanta Deka, D.E.E.O. Nalbari district.



5th June 2023 ASC, Paschim Nalbari Block celebration World Environment Day. On this day we plantation 10 nos of various plants. After tree plantation held a Poster drawing competition among the students premises of ASC, Paschim Nalbari Block.



BLOCK LEVEL ACTIVITIES OF ASC HAJO BLOCK, KAMRUP

গণিতৰ কৰ্মশালা আৰু ৰাষ্ট্ৰীয় গণিত দিৱস উদযাপন (22 December, 2023)

যোৱা ইংৰাজী ২২ ডিচেম্বৰ, ২০২৩ তাৰিখে ১৯শ শতিকাৰ যিজন ভাৰতীয় গণিতজ্ঞই আত্মবিশ্বাস আৰু স্বপ্ৰতিভাৰ বলত এক অনন্য গাণিতিক প্ৰতিভাৰ বিকাশ আৰু চিন্তা চৰ্চাৰ বাটত গণিতৰ ইতিহাসত নিজকে প্ৰতিষ্ঠিত কিৰ বিশ্বজোৰা খ্যাতি কঢ়িয়াই আনিবলৈ সক্ষম হৈছিল, সেইজন ভাৰতীয় গণিতজ্ঞক একাজনি শ্ৰদ্ধাঞ্জলী দিয়াৰ উদ্দেশ্যে হাজো আৰ্যভট্ট বিজ্ঞান কেন্দ্ৰ আৰু বিদ্যাৰ্থী ছিনিয়ৰ ছেকেণ্ডাৰী স্কুলৰ সহযোগত ৰাষ্ট্ৰীয় গণিত দিৱস পালন কৰা হয়। এই উদ্দেশ্যে বিদ্যাৰ্থী ছিনিয়ৰ ছেকেণ্ডাৰী স্কুলৰ ছাত্ৰ-ছাত্ৰী সকলৰ মাজত অনুষ্ঠিত হোৱা কৰ্মশালাৰ প্ৰথম কাৰ্যসূচীত শ্ৰীনিবাস ৰামানুজনৰ প্ৰতিচ্ছবিত বস্ত্ৰি প্ৰজ্বলন আৰু মালাৰ্পন কৰা হয়।



Night Sky Observation: (24th January, 2023)

ৰামদিয়া শংকৰদেৱ শিশু বিদ্যা নিকেতনৰ ৰূপালী জয়ন্তী উপলক্ষে Guwahati Planetarium আৰু হাজো আৰ্যভট্ট বিজ্ঞান কেন্দ্ৰৰ সহযোগত Night Sky Observation কাৰ্যসূচী গ্ৰহণ কৰা হয়। ৰামদিয়া অঞ্চলৰ প্ৰায় ১৫০ গৰাকীমান ছাত্ৰী-ছাত্ৰী আৰু নিকেতনৰ সমূহ শিক্ষক-শিক্ষয়িত্ৰীবৃন্দই এই কাৰ্য সূচীত অংশ গ্ৰহণ কৰে। কাৰ্যসূচীৰ আতৰ্ধৰে হাজো আৰ্যভট্ট বিজ্ঞান কেন্দ্ৰৰ সমন্বয়ক ৰাজীৱ বৰুৱাই।



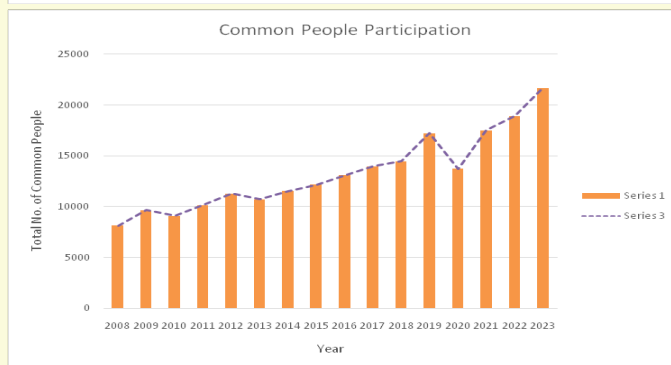
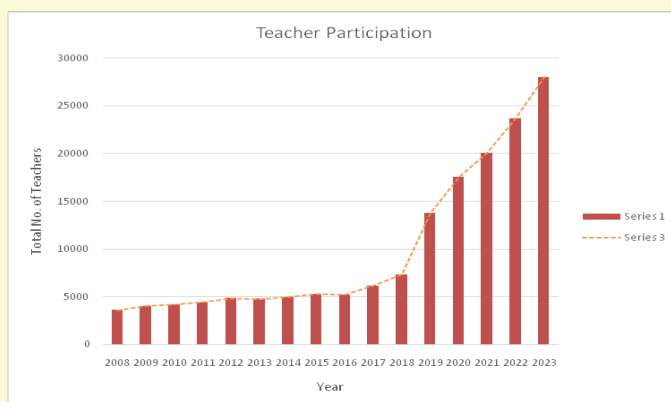
A Study on Participation of Students, Teachers and Common People in the Field of Science and Technology through Aryabhata Science Centres 2008-2023

Himangshu Talukdar
Project Scientist, ASTEC

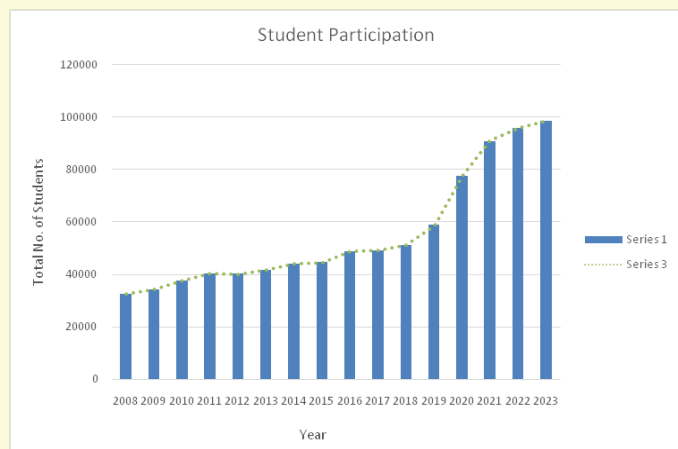
A study was conducted by ASTE council to analyse the participation of students, teachers and common people in the field of science and technology through the Aryabhata Science Centres. The objective of this study was to try and formulate a plan for the improvement of the teaching and learning of Science and Technology at the school level in Assam, based on an assesment of its present status from the time of inception of the Aryabhata Science Centers. With reference to the above objective, questionnaires were prepared and distributed among all the Block coordinators and District coordinators of the Aryabhata Science Centers. Primary data was collected from 34 districts and 219 Blocks. The study was conducted from the year 2008 to 2023 by the Science and Technology Division of ASTE Council.

The chart below shows the participation of students, teachers and common people in different blocks of Assam. All the data collected from every block was added up with respect to the year and accordingly the result was plotted against the year.

This analysis was done on the basis of the information sheets provided to the Block Coordinator and District Coordinators. The respective block coordinators and district coordinators furnished all the details in the information sheets and provided us the data which was later used to make this analysis



From the Bar Charts above it is seen that there is a continuous rise in the participation of students, teachers and common people involved in the block level competitions held by the Aryabhata Science Centres situated in all the blocks. It is seen that the participation of students from the year 2008 to 2023 almost doubled from 32,707 to that of 98,567. Similarly, involvement of teachers and common people, increased from 3,591 to 28,030 and 8,135 to 21,677 respectively. It is observed that there is a sudden rise in participation of students and teachers in the year 2019 as there was an awareness program “Raj Mel” that was organized by the council which is to eradicate superstition from the society. It can also be seen that there is some deviation of the variables from the trend line in some particular years but it is evident from the charts that every year there is a rise in the participation of students, teachers and common people.



REPORT ON STATE MEET OF ARYABHATTA SCIENCE CENTRE DURING 25th & 26th MAY 2023 AT MANIRAM DIWAN TRADE CENTRE, GUWAHATI

Himangshu Talukdar, Project Scientist
& **Mrs. Divyakanta**

Ex. Project Scientist, S&T Division, ASTEC.

The State Meet of Aryabhata Science Centre was organized from 25th and 26th May, 2023 at Maniram Diwan Trade Centre, Guwahati. There were 632 numbers of participants, out of which 207 numbers were block coordinators, 34 numbers were district coordinators, 325 numbers were student and 66 numbers were guide teachers.

The inaugural function was held on 25th May, 2023 at the Auditorium of Maniram Diwan Trade Centre, Guwahati. The chief guest for the function was Shri Keshab Mahanta, Hon'ble Minister of Science Technology and Climate Change Dept. Govt. of Assam and other dignitaries were Dr. Gautam Barua, Director, IIIT Mirza, Kamrup and Smt. Laya Madduri IAS, Secretary to the Govt. of Assam, Science Technology and Climate Change Dept. Govt. of Assam, Smt. Kimnie Changsan, ACS, Additional Secretary to the Govt. of Assam, Science Technology and Climate Change Dept. Govt. of Assam, Dr. Jaideep Baruah, Director, ASTEC and Er. Biman Chandra Baruah, Head(i/c), S&T division, ASTEC.

The Hon'ble Minister awarded The Best Aryabhata Science Centre-2022 to Aryabhata Science Centre, Howraghat Block of Karbi Anglong district and good performing Aryabhata Science Centre to Birsing Jorua block of Dhubri district and Sarukhetri Block of Barpeta district. The dignitaries also inaugurated the exhibition stall for model making competition and the State Level Robotics Competition, for the first time we have successfully organized an autonomous Line Follower Robotics Competition open to all students who are yet to complete graduation and studying within Assam. The first prize winner got an amount of Rs.20,000/-, second prize winner got Rs. 15,000/- and third prize winner got Rs. 10,000/-.

The two days state meet consisted of different competition. The competitions included science based extempore speech, poster drawing competi-

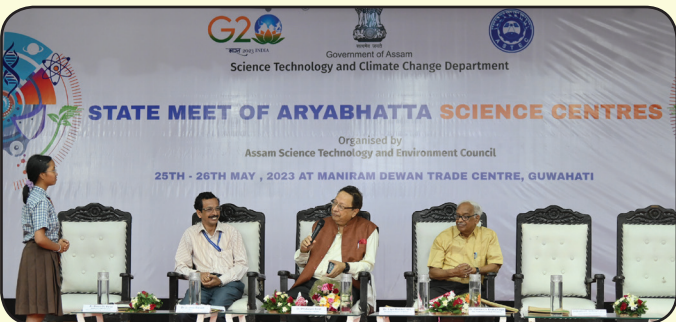
tion, idea competition and model making competition. Other than regular activities this year we have organized Robotics Activities through Spark Bee, Learning Science through Experiments By Regional Science Centre, Khanapara, Magic Science Show by Aryabhata Science Centre, Kalaigaon block, Udalguri district, Review on activities of Aryabhata Science Centre with coordinators and district coordinators of Aryabhata Science Centre and Scientist-Students Interaction Programme by the Resource Person Dr. Parimal Chandra Bhattacharjee, Rtd. Professor, Gauhati University.

The Programme was concluded with the Valedictory Function on 26th May, 2023. Dr. Dhruvajyoti Bora, Vice-Chancellor of Shrimanta Shankardev University of Health Sciences and Dr. Parimal Chandra Bhattacharjee, Rtd. Professor, Gauhati University was the Chief Guest of honor, other dignitaries were Dr. Jaideep Baruah, Director ASTE Council and Er Biman Chandra Baruah, Head(i/c), S&T division, ASTEC. The guests addressed the gathering with the motivational speech to the students. Some of the students also shared their views and feedbacks on the state meet programme. During the event, ASTE Council has also facilitated Mr. Hridam Thakuria for securing the top position in HSLC exam 2023. In the past years Hridam has also participated in the state level activities of ASC. As a token of outstanding performance, the council has awarded with a sum of Rs. 10,000/- along with the certificate of appreciation. There after the results of the competitions were announced and the prizes and the certificates were distributed to the participants of different category. The programme finally ended with the vote of thanks to each and every person who is associated directly or indirectly to make the event successful.

The details of prize winners of respective competitions are as follows:

NAME OF THE COMPETITION: POSTER DRAWING COMPETITION				
Sl. No.	Name of the student	School Name	District	Position
1	Hemshikhar Das	Bonda Anchalik High School, Bonda	Kamrup	First (₹10,000/-)
2	Gitartha Ray	D.K.College	Kamrup	Second (₹7,000/-)
3	AbhilashDutta	VKV, Kamalabari	Majuli	Third (₹5,000/-)
4	Pranamika Borah	Jonaki Samahiaati Model H S School	Majuli	Consolation (₹1,000/-)
5	Prakriti Boruah	Sankardev Sishu Bidya Niketon	Sivasagar	Consolation (₹1,000/-)
II. NAME OF THE COMPETITION: IDEA COMPETITION				
Sl. No.	Name of the student	School Name	District	Position
1	Prangshu Chetia	Radhakrishnan Academy, Kakapather	Tinsukia	First (₹10,000/-)
2	Lupamudra Gogoi	JNV, Jorhat	Jorhat	Second (₹ 7,000/-)
3	Mehrin Alam	Nagabandha Secondary School, Laharighat	Morigaon	Third (₹ 5,000/-)
4	Rishita Sarma	Sankardev Sishu Niketan, Ghagrapar	Nalbari	Consolation (₹1,000/-)
5	Adrija Mazumder	Don Bosco High School, Hojai	Hojai	Consolation (₹1,000/-)
III. NAME OF THE COMPETITION: EXTEMPORE SPEECH COMPETITION				
Sl. No.	Name of the student	School Name	District	Position
1	Dinah Hansepi	Don Bosco High School, Hamren	West KarbiAn- glong	First (₹10,000/-)
2	Syeda Munjima Sharin Sultana	Dandadhar Girls H.S	Golaghat	Second (₹ 7,000/-)
3	Imon Samazdar	Radeuqis Future Academy, Lakhipur	Goalpara	Third (₹ 5,000/-)
4	Meghna Borah	Donbosco H.S. Lichubari	Jorhat	Consolation (₹ 1,000/-)
5	Punal Basumatary	Holy Cross high school	Karbi Anglong	Consolation (₹ 1,000/-)
IV. NAME OF THE COMPETITION: MODEL MAKING COMPETITION				
Sl. No.	Name of the student	School Name	District	Position
1	Debasish Thakuria Prantik Pratim Medhi	Ramanujan Senior	Nagaon	First (₹ 20,000/-)
2	Sujan	Jyanpith Jatiya Bidyalaya	Dhubri	Second (₹ 15,000/-)
3	Nibir Protim Hazarika Niron Dhar	VKV, Golaghat	Golaghat	Third (₹ 10,000/-)
4	Klarbon Terangpi Jilin Beypi	Rongoga High School	West Karbi- Anglong	Consolation (₹ 1,000/-)
5	Kalpajyoti Buragohain	Pub Sadiya M.E. School, Sadiya	Tinsukia	Consolation (₹1,000/-)
V. NAME OF THE COMPETITION: STATE LEVEL ROBOTICS COMPETITION				
Sl. No.	Name of the student	Group Name	District	Position
1	Asif Amir Zaman Rajkamal Bhuyan	EPIKART	Kamrup(M)	First (₹ 20,000/-)
2	Akshit Agarwal Mehul Jain Virat Kashyap	THE SQUAD	Kamrup(M)	Second (₹ 15,000/-)
3	Suryaansh Choukhany Aarav Advkia	BRICK BRUTE	Kamrup(M)	Third (₹ 10,000/-)

PHOTO GALLERY OF STATE MEET OF ARYABHATTA SCIENCE CENTRES-2023



Chief Editor : Dr. Jaideep Baruah
 Editor : Er. Biman Ch. Barua
 Associate Editor : Parmeeta Borthakur, Himangshu Talukdar

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