



# Navi Mumbai Science Foundation

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## Annual Report for the year 2019-20.

### Contents:

- I. Introduction
- II. Science Nurture Club – 2019-20.
- III. National Children’s Science Congress-2019 (NCSC-2019) Activity.
- IV. Homi Bhabha Bal Vaidnyanik Competition [HBBVC] 2019-20.  
(Interactive Guidance Sessions by Scientists & Research Scholars)
- V. Pre-Regional Mathematics Olympiad (Pre-RMO) & RMO Examination  
[Guidance Sessions: 2019-20]
- VI. Fun with Science Programmes.
- VII. Special Events: World Nuclear Energy Day-2019 celebration.
- VIII. Essay Competition on the topic “Nurturing Talent for Noble Laureatism”
- IX. Signature Event of NMSF: Science Utsav-2020.
- X. National Science Day celebration.
- XI. Judging.
- XII. Miscellaneous Activities.
- XIII. Publication of e-magazine: EduREKA (A new activity)
- XIV. Administrative Matters.
- XV. Acknowledgements.

Our Website: <http://www.navimumbaisciencefoundation.org>

## **I. Introduction.**

**Navi Mumbai Science Foundation (NMSF)** is a science led NGO which endeavours to promote development of scientific culture in the society and scientific temperament among students. To achieve this objective, it plans and conducts a multitude of activities in each academic year. These activities are focused on building a problem-solving attitude in students while developing their collaborative mindset. It endeavours to ensure their successful transition from pure academics to facing problems related to societal needs. The following activities conducted during the year under consideration will make this point clear:

**National Children's Science Congress (NCSC) activity**, in particular, engages a large number of students and exposes them to basics of research and the essentials of collaborative work culture. **For Homi Bhabha Bal Vaidnyanik Competition [HBBVC]** and **Regional Mathematics Olympiad examination**, NMSF conducts interactive sessions for science and Mathematics. **This programme provides a platform for interaction between students and creative personalities.**

**The two-day Science Utsav** program organizes **Teachers' Conference** on day one and **student's exhibition on science experiments** on day two. Teachers' conference (i) provides a prime opportunity to teachers to acquaint themselves first hand with the latest trends in the field of education and (ii) to get to know the mindset of their colleagues as regards strategies of knowledge transmission. The **second day's programme** inspires students to demonstrate their experimental skills and to assess understanding of basic scientific principles.

The objective of "**Science Nurture Club**" (for students of **Std. VII and VIII**) is to build the interest of students in science through discussions and hands-on activities like experiments and projects while keeping the school syllabus in mind.

**The Essay Competition on the topic "Nurturing Talent for Nobel Laureatism"** has been introduced at school level to enable bright students to get acquainted with basic sciences and opt for careers in these streams as well.

**"Fun with Science Activity"** conveys the joy that science education has in store for students.

The **"World Nuclear Energy Day"** celebrates the discovery of nuclear chain reaction and gives a glimpse of Indian nuclear energy programme for societal benefits.

*What follows is a run-up of the year that was, detailing what NMSF is trying to defend and illustrating what it is trying to achieve.*

## **II. Science Nurture Club 2019-20.**

This program is designed for students of Std. VII and VIII and is organized in association with "Kindle Education Services". The classes, taken in separate batches for VII and VIII standard students, consisted of 32 and 37 respectively. Interactive sessions of 1.5 hours each were held on Sundays from July 2019, to Feb 2020. These classes were conducted at Fr. Agnel Multipurpose School & Junior College, Sector 9A, Vashi, Navi Mumbai. The objective, achieved through discussions and hands-on activities like experiments and projects, was to build interest of students in science and help them become independent learners.

### III. National Children's Science Congress-2019 (NCSC-2019) Activity.

This is a very popular scientific activity among student community of Navi Mumbai. It engages a large number of students and exposes them to basics of research and essentials of collaborative work culture.



Inauguration of the NCSC-2019 Event



Students' oral presentations (NCSC-2019)

The entire activity for the year 2019 may be summed up as under:

\*Number of registrations received: 80.

\*Number of schools involved: 12.

\*Number of students involved: 160.

- \*Screening of Projects carried out on: 29 and 30 September 2019.
- \*Number of judges involved during screening: Seven, on each day.
- \* Number of teams selected for oral presentation: 42.
- \*Date of oral Presentations: 12-10-2019.
- \*Number of judges involved: Eight.
- \* Number of teams selected for regional screening: Six
- \* Number of teams selected for state level presentation: Two.

**Teams that reached up to state level presentations:**

**1. Participants:** Devshree Angchekar, Ishika Walnekar:

Teacher Guide: Mrs. Subuhi Mahmood

**School:** MGM prim., & Sec School, Sec 8 Nerul, Vashi

**Project Title:** Comparative study of plants grown in hydroponic soln. & in soil

**2. Participants:** Rididi Sinha, Vasudha Saxena

**Teacher Guide:** Vineeta Gupta

**School:** Reliance Foundation, Koparkhairne

**Project Title:** Ecofriendly dyes

#### **IV. Homi Bhabha Bal Vaidnyanik Competition [HBBVC] 2019-20.**



**Practical's Workshops:** To provide hands-on experience to individual students, practical workshop was conducted at the above venue on November 24, 2019, and December 15, 2019, for students of standard VI & IX respectively. Total number of 56 students of VI and 45 students of IX attended the workshops. Twenty-four practicals (8 each in Biology, Chemistry and Physics) were performed by each student.

**Theory sessions:** Interactive Guidance Sessions by Scientists and Research Scholars were conducted for students of std. VI at Fr. Agnel Multipurpose school, Sector 9A, Vashi, Navi Mumbai, on Sundays during 9. 00 AM to 12. 30 PM. Students from different schools attended these guidance lectures on Biology, Chemistry and Physics - 15 lectures on each subject and additional 5 lectures on mathematics. Lectures were delivered by experts in respective fields during the period 14-04-2019 to 01-09-2019. A total of 45 students of std. VI attended these guidance sessions.



*Students who received medals HBBVC 2019*



**HBBVC Practice sessions in Practicals in progress.**

## **V. Pre-Regional Mathematics Olympiad (Pre-RMO) & RMO.**

Guidance classes for pre-RMO was conducted by Joseph Amalnathan (scientist from BARC) and Prof. Anjana Prasad (retired professor of Mathematics from Mumbai University) on a voluntary basis. Students in standard VIII and IX, who are eligible to appear for this examination had joined the course which started in April 2019 and went through till December 2019, even past the Pre-RMO examination - in the interest of the students. These classes, highly tuned for competitiveness of the Olympiad standards, were conducted in Fr. Agnel Multipurpose School & Junior College, Sector 9A, Vashi, Navi Mumbai, on every Saturday evening for about one and half hours each.

## **VI. Fun with Science (FWS) Programmes.**

This is a very informative and interesting programme conducted by NMSF to promote talent in students to learn science. It is essentially conducted for middle school and high school level students using very simple gadgets to explain the basic physics principles. Several such programmes have been conducted by NMSF earlier. During the period of this annual report following programmes were conducted (this programme can be arranged on request, at any schools at any time of the year, in and around Navi Mumbai):

**FWS-1 & 2:** At Shree Gujarat Samaj, Vashi, on May 1, & 2, 2019, for children of middle & primary school level respectively, as part of their summer camp.

**FWS-3:** At NACIN (National Academy of Customs, Indirect Taxes and Narcotics), Bhandup, on May 8, 2019, for children (of middle school level) of employees, as part of their summer camp.

**FWS-4:** On Jan. 17, 2020, for middle school level girl students of “Shakti Girls” at their Kharghar premises. Attendance: 20 students and 2 teachers.

**FWS-5:** On Feb. 25, 2020, for students of primary section (Std. I to Std. V) at OES Int’l School during their “National Science Week” celebrations. The workshop was attended by ~ 80 students and 5 teachers.

## **VII. Special Events: World Nuclear Energy Day-2019 celebration.**

World Nuclear Energy Day (WNED) was celebrated jointly by Navi Mumbai Science Foundation and Karmaveer Bhaurao Patil College (KBPC), Vashi, on 2<sup>nd</sup> December 2019, in association with Atomic Energy Regulatory Board (AERB) and Indian Association for Radiation Protection at KBPC premises at Navi Mumbai. It was to commemorate the anniversary of criticality achieved at the first reactor constructed by Famous American Scientist Enrico in the year 1942.

The programme started by lighting of sacred lamp and offering of floral tributes by all the dignitaries to the Founder of Rayat Shikshan Sanstha, Late Padmabhushan Shri Karmaveer Bhaurao Patil, as KBPC is part of this Sanstha. Later Vice-Principal, Shri Chandrasekhar Bhosale, spoke about the significance of World Nuclear Energy Day (WNED) program.

Dr. D A R Babu, Secretary, NMSF, also laid emphasis on the importance of WNED programme. He then introduced the Chief Guest, Dr. P. R. Vasudeva Rao, Vice Chancellor, Homi Bhabha National Institute (HBNI), and invited him to deliver the “Enrico Fermi Memorial Lecture”.



**Chief Guest P. R. Vasudeva Rao, Vice Chancellor, Homi Bhabha National Institute, being felicitated by Vice Principal Chandrasekhar Bhosale.**

Dr. Vasudeva Rao delivered his talk on '**Plutonium: A unique element**'. In his introductory remarks about Fermi, he cited that "No one in the history of modern physics was more versatile than Fermi and his contributions in theoretical and experimental physics were equally great". The appearance of Fermi's name in physics terminology under several heads, viz: Fermi-Dirac statistics, Fermion, Fermi gas, Fermi length, Fermi level, Fermium etc., are worth mentioning. He was an excellent teacher and team leader. He, along with his team set up the first Chicago pile-1, where controlled nuclear chain reaction was successfully demonstrated on December 2, 1942. Fermi received the "Nobel Prize for Physics in 1938 for his demonstrations of the existence of new radioactive elements produced by neutron irradiation, and for his related discovery of nuclear reactions brought about by slow neutrons".

Following the Chief Guest's talk, Dr. D A R Babu, Secretary, Navi Mumbai Science Foundation (NMSF), highlighted the activities of the Foundation. NMSF is a science led NGO in India which is dedicated to development of "scientific temperament" in the society in general and the student community in particular. This in turn will contribute towards the holistic development of the nation & prepare it to face the challenges posed by a technologically advancing global environment without losing sight of its societal commitments.

**Some of the key points of its action plan are:**

Develop a network of professionals and personalities to share their knowledge;  
Provide multi-disciplinary environment to students to understand their inter linkages;  
Provide a platform for interaction between leading educationists, teachers and students;  
Encourage participation in scientific activities like:

- i) Homi Bhabha Bal Vaidnyanik Competition (HBBVC),
- ii) Regional Mathematics Olympiad,
- iii) National Childrens' Science Congress (NCSC), an activity of GOI,
- iv) World Nuclear Energy Day celebration,
- v) Two-day Science Utsav:
  - a) Teachers' Conference (Day 1), b) Exhibition of Science Experiments (Day 2)
- vi) 'Fun with Science' activity,
- vii) Science Nurture Club activity, and
- viii) Essay competition on "Nurturing Talent for Nobel Laureatism"
- xi) Publication of quarterly e-Magazine 'EduREKA'

The final talk of the day referred to the applications of radioisotopes in environment for the benefit of humankind. It was delivered by Dr. H. J. Pant of Isotope and Radiation Applications Division, BARC.

Radiotracers have been widely used in environment for troubleshooting and generation of useful information because of their many advantages over conventional tracers. The main advantages of radiotracers are physico-chemical compatibility, high detection sensitivity, in-situ detection & availability of a number of radiotracers for different phases; the radioactive material in a suitable physico-chemical form, similar to that of the process material, is instantaneously injected into the system at a suitable point and its passage is monitored along the system at strategically selected locations using collimated radiation detectors. The monitored tracer concentration data is plotted as a function of time and interpreted to obtain information about the process or hydrodynamic behavior of the system. Listed below are some of the investigations done using radioactive tracers.

- Leak detection in buried pipeline and industrial systems & its environmental implications
- Flow rate measurements in streams & rivers

- Sediment transport investigations in ports
- Effluent dispersion studies in water bodies
- Radiotracer applications in oil field investigations
- Seepage studies & underground water movement

Since early sixties, Bhabha Atomic Research Centre (BARC), Mumbai has made pioneering contribution to the development and promotion of radiotracer technology in India and Asia Pacific region for several environmental investigations.

Dr. Murali Seshadri of Radiation Safety Systems Division, BARC, enlightened the participants about the safety culture in DAE. He explained the complete organizational chart of DAE. He mentioned how AERB is regulating and maintaining an excellent safety culture in all DAE (mainly nuclear power plants) and non-DAE facilities. In view of the present scenario, where radio-isotope applications have increased considerably, his presentation was appropriate for the event. He also mentioned about radiation safety implementation in BARC facilities by BARC Safety Council.



**View of the participants attending the WNED-2019.**

### **Results of MCQ Test & Essay Competition**

<b>WNED-2019: Student winners</b>		
<b>Rank</b>	<b>Multiple Choice Questions Test</b>	<b>Essay Competition</b>
1 <sup>st</sup> Prize	Rajlaxmi Narale	Aachal Upadhya
2 <sup>nd</sup> Prize	Vrushali Salunke	Rajshree Chickane
3 <sup>rd</sup> Prize	Siddi	Mayuri Mardhekar



**Distribution of prizes to winners of MCQ test and essay competition by Chief Guest.**



**WNED-2019: Organizing teams NMSF and Karmaveer Bhaurao Patil College.**

Prof. Gaikwad Y. A, Head, Chemistry Department, was the moderator for Question-Answer session. The program concluded with a vote of thanks by Dr. Gurumeet Wadhawa.

### **VIII. Essay Competition on the topic “Nurturing Talent for Noble Laureatism”.**

This event is a first of its kind initiated by NMSF for the last two years. It was organized in association with Reliance Foundation School, Koparkhairne. Participation in it was restricted to students of Std. IX & X.

NMSF felt that there is a need to promote basic sciences at school level by encouraging bright students to opt for science subjects as well rather than getting attracted only towards lucrative branches of engineering & technology which offer an excellent pay package and hence a rich material life style from day one of their career. It was also emphasized that a career in basic sciences offers more satisfaction in the long run.

The competition was thus aimed at drawing the attention of the young minds to the fact that there has been a dearth of Nobel Prizes in the country. It was also to remind the younger generation that India too had a rich past in scientific achievements in the fields like Mathematics, Astronomy, Medicine & Metallurgy which covered India with glory for more than two millennia before the 12<sup>th</sup> century AD. Revival of the past glory should not, therefore, prove to be an insurmountable challenge.

With this aim in mind, the essay competition was conducted (for the 3<sup>rd</sup> consecutive year) at Reliance Foundation School on Friday, 16<sup>th</sup> August, 2019 (written test) and Saturday, 23<sup>rd</sup> November, 2019 (oral + ppt presentation, followed by an interview) for all the three branches, i. e., Physics, Chemistry and Biology (Physiology or Medicine). Following are results based on the overall performance of students:

**Table showing the winners of the essay competition**

S. No.	Name of the student	School	Stream	Position
1.	Ashvin Vinod Nair	Reliance Foundation School, KK	Biology	1
2.	Tushti Sontakke	New Horizon Scholar School, Thane	Biology	2
3.	Rudraksha Dixit	Podar International School CBSE Nerul	Biology	3
4.	Aabhas Mishra	Podar International School CBSE Nerul	Chemistry	1
5.	Sarthak Saxena	Podar International School ICSE Nerul	Chemistry	2
6.	Zoya Asif Iqbal Shaikh	Radcliffe School, Kharghar	Chemistry	3
7.	Riddhi Shukla	DAV Public School, Airoli.	Physics	1
8.	Amishi Pande	Bal Bharti School, Navi Mumbai	Physics	2
9.	Shikharini Basu	Podar International School ICSE Nerul	Physics	3

**Best School: Podar International School, CBSE, Nerul, Navi Mumbai.**

The response to the event was encouraging enough to ensure its continuity in the following years.



**Students participating in essay writing competition**



**Prize distribution by the chief guest to winners**



**Participating students for oral presentation with judges**

## **IX. Signature Event of NMSF: Science Utsav-2020.**

**Science Utsav–2020** was organized on 11-12 January, 2020, at Gujarat Samaj Bhavan, Sector 15, Vashi, in association with Shree Gujarati Samaj, Vashi, and Maharashtra Academy of Sciences (Mumbai Chapter). This is a two-day programme. The first day, Teachers' Conference, is dedicated to science teaching faculty and second day is dedicated to children to demonstrate their experimental skills. Stalls were arranged on second day by various renowned institutions to demonstrate basic scientific principles.

**Day-1 (Teachers' Conference TC-2020):** The main and sub-themes were selected with the guidance from Homi Bhabha Centre for Science Educations (HBCSE), Mankhurd, Mumbai. The conference is open to all secondary standard science teachers of schools located in Navi Mumbai area. NMSF organizes this event to pool the innovative ideas arising from practicing teachers under single platform. In the process, many teachers learn new ideas/practices of teaching and discuss their problems in an open forum. Nearly 35

teachers (both from Navi Mumbai Municipal Corporation schools and private schools) attended the conference and presented their papers.

**The main theme of the teachers' conference:**

**“Effective science teaching-learning strategies for classrooms”.**

**The Sub themes were as under:**

- a) Designing engaging learning tasks for classrooms.
- b) Active learning strategies: their development and use
- c) Action research, interventions and experiments in science education in classrooms.
- d) Dealing with diversities in classrooms.
- e) Reporting learning episodes from classrooms.
- f) Teacher collaborations for effectiveness in classrooms.
- g) Taking note of students' informal ideas in the classroom.

The conference was inaugurated by Dr. Kalpana Kharade, visiting faculty at HBCSE. After her inaugural speech and release of proceedings, invited speakers Dr. Reema Mani and, Dr. Rajendra Kavathekar delivered their talks in the pre-lunch technical session. Dr. Deepa Chari and Dr. Brijbala Suri delivered their talks in the afternoon technical session. Participating teachers from various schools also presented their papers in the morning and afternoon sessions. Proceedings of the conference were made available to all the participating teachers. The programme concluded with feedback from the teachers and distribution of participation certificates.



**Teachers' Conference 2020: Dignitaries seated on the dais.**



**Teachers’ Conference 2020: Release of the conference proceedings by the chief guest.**



**Winner teams of NCSC-2019 being felicitated by the chief guest.**



**Invited speakers at TC-20 were felicitated by NMSF executive committee members.**



**TC 2020: Participating teachers, invited speakers, and organizers**

**Day-2 (12-01-2020):** To inspire students to demonstrate their experimental skills and to assess their understanding of basic scientific principles, second day was exclusively dedicated to demonstration of science experiments by students at the same venue. This event was inaugurated by Shri Kantibhai, Secretary, Gujarat Samaj, Vashi. Eight teams participated in demonstration of experiments from various schools of Navi Mumbai area.



**Inauguration of students' experiments stalls by Shri Kantibhai of Sri Gujarat Samaj.**

Following demonstration stalls were also set up during the event by several voluntary organizations. Their utility could be judged by their crowd-pulling ability:

1. Two stalls from Homi Bhabha Centre for Science Education (HBCSE, TIFR).
2. Science through toys by Prof. R. D. Kavathekar.
3. Light and LASER based demonstration by Shri Kolge, a retired engineer from ISRO.
4. Origami-Thane.

**Prizes** for the participants of science experiments were distributed at the end of the programme.



**Students explaining their exhibit**



**A team receiving participation certificates**



**Participating students, accompanying teachers, members of demonstration stalls & organizing committee members at the “Exhibition of Science Experiments”**

## **X. National Science Day.**

National Science Day-2020 was celebrated jointly by NMSF and Rayat Shikshan Sanstha’s Karmaveer Bhaurao Patil College (Department of Chemistry), Vashi, Navi Mumbai, on 28 February, 2020, for the first time.

Need of such celebrations is essential in the present scenario to bring to the notice of the present student community the huge strides made by independent India in the field of education and “engineering & technology”. While progress in education was phenomenal, it remains confined, more or less, to lateral growth. The emphasis here has been so immense that we lost sight of vertical growth i. e. growth of “centers of excellence” in science & technology became a casualty. As a result, the real talent started migrating in search of greener pastures & the trend still continues. It is now time to review our educational system and make it broad based, i. e. laying equal emphasis, if not more, on R & D effort.



**A Drone photograph of field display of the “Periodic Table”.**

The effort should be so intense that it leads to trend reversal among migrating real talent. While doing so, we need to remind our younger generation that India too had a rich past in scientific achievements in the fields like Mathematics, Astronomy, Medicine & Metallurgy which covered our country with glory for more than two millennia before the 12<sup>th</sup> century AD. Revival of the past glory should not, therefore, prove to be a daunting task.

It may then be easy to understand why NMSF and KBPC have come together to revitalize the idea of “**National Science Day**”. It will also bring in focus the fact that India is a parched country as far as the count of homegrown Nobel Laureates in science is concerned. The last Indian Nobel Laureate in science stream was seen on the world stage in the year 1930. The wait has been too long to be ignored any longer. Accordingly, the event was divided in 2 main parts:

**In the first part**, the focus was on United Nation’s “**International Year of Periodic Table-2019**” which was fully implemented by the students. The event started with all 118 elements being displayed with placards by many students arranged in the periodic table format on the steps of the garden around the statue of Karmaveer Bhaurao Patil in the college premises. The event became lively when a few elements were randomly selected and the concerned students were asked to explain their properties and uses.

**In the second part**, three invited talks were arranged on the noble prize-winning topics of the year 2019 in the field of Chemistry, Physiology/Medicine and Physics. Their contents are briefly summarized below:

1. **The talk on Nobel Prize in Chemistry** was delivered by Dr. Haridas Pal, ex-BARC scientist. As elaborated by him, the 2019 Nobel Prize in Chemistry was awarded to John Goodenough, M. Stanley Whittingham and Akira Yoshino “for the development of lithium-ion batteries”. This lightweight, rechargeable and powerful battery is now being used in everything from mobile phones to laptops and electric vehicles. It can also store significant amounts of energy from solar and wind power, making possible a fossil fuel-free society. These scientists have literally created a rechargeable world.

2. **The talk on Nobel Prize in Physiology or Medicine** was delivered by Dr. Vipul K Pandey, BARC. As elaborated by him, the 2019 Nobel Prize in Physiology or Medicine was awarded jointly to William G. Kaelin Jr, Sir Peter J. Ratcliffe and Gregg L. Semenza" for their discoveries on how cells sense and adapt to oxygen availability."

Animals requiring oxygen for the conversion of food into useful energy has been long understood, but how cells adapt to changes in levels of oxygen has been unknown. The winners discovered how cells can sense and adapt to changing oxygen availability. They identified molecular machinery that regulates the activity of genes in response to varying levels of oxygen. Their discoveries have also paved the way for promising new strategies to fight anemia, cancer and many other diseases.

3. **The talk on Nobel Prize in Physics** was delivered by Dr. Subir Bhattacharyya, a scientist presently working at BARC. As elaborated by him, the Canadian-US scientist James Peebles won his half of the prize for his work in predicting cosmic microwave background and creating a theoretical frame work from which other scientists have been able to calculate the age and structure of the universe, including the calculation that the universe is 95% dark matter and dark energy.

Queloz and Mayor, both from Switzerland, won their prize for discovering the first known exoplanet in 1995. The planet was a Jupiter-like gas giant some 50 light years away from Earth. Since their discovery, over four thousand other exoplanets have been discovered. These efforts try to answer the questions about: 'are we alone - is there life anywhere else in the Universe? All the 3 talks were lucidly presented by respective speakers & were heard with rapt attention. Each talk was also followed by a few questions from the audience.

All the 3 talks were lucidly presented by respective speakers & were heard with engrossed attention. Each talk was also followed by a few questions from the audience.

## **XI. Judging**

1. Dr. D A R Babu served as Chief Guest and Judge to assess the science projects presented at Sai Holy Faith High School, Koparkhairne, during their annual science exhibition organized on 19-12-2019.

2. Podar International School (CBSE), Nerul, celebrated their school valedictory function-cum-prize distribution ceremony and Annual Science Exhibition 'TECH ZOO- 2020' on 1, February 2020. Two of NMSF members, Dr. D. A. R. Babu and Shri M. P. Bellary, were invited as judges for the event. Dr. A. M. Bhagwat was invited as Chief Guest at the valedictory function-cum-prize distribution ceremony.

## **XII. Miscellaneous Activities**

1. Dr. A. M. Bhagwat was invited as Chief Guest at Reliance Foundation School, Koparkhairne, Navi Mumbai. Theme topic being: **"Earth – An Inspiration"**.

2. St. Mary High School, Vashi, invited Dr. D A R Babu, Secretary, Navi Mumbai Science Foundation as Chief Guest during inauguration of their annual science event **"ENIGMA-2019"** conducted on 23-11-2019.

3. Dr A. M. Bhagwat was invited as Chief Guest by Guru Nanakdev Vidyalaya, Ghatkopar, on 5<sup>th</sup> Dec. 2019, for the valedictory function-cum-prize distribution ceremony of **Science Exhibition** of M ward (East) schools of Mumbai Municipal Corporation.
4. Dr A. M. Bhagwat was invited as Chief Guest at Sanpada College of Commerce & Technology, Sanpada, Navi Mumbai on 7<sup>th</sup> Dec. 2019, for the valedictory function-cum-prize distribution ceremony of Science Exhibition “**INSPIRON 2K19**”.
5. Dr A. M. Bhagwat was invited as Guest of Honour at Mary Immaculate Girls’ High School, Santacruz (East), on Jan. 23, 2020, for the Zonal Science Exhibition on “**SCIENCE and TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT**”, organized by the Education Department of Govt. of Maharashtra.
6. Dr A. M. Bhagwat and Dr D A R Babu organized a workshop for Navi Mumbai Municipal Corporation teachers' attending Teachers' Conference (TC-2020) was conducted on 18-07-2019 prior to their participation at one of NMMC schools, Vashi.
7. Dr. A. M. Bhagwat conducted NCSC workshop at Podar Int'l Sch (CIE) on 30. 07. 2019; Attendance: ~ 250 students in the first sitting & ~ 20 students in the final sitting; No. of teachers involved: 6 & 3 respectively.

### **XIII. Publication of e-magazine: EduREKA (a new activity)**

NMSF has started a quarterly e-Magazine "EduREKA" from April, 2019 onwards. Four issues were released during this reporting period. This initiative was taken by NMSF for the benefit of students mainly belonging to age group of Std. VI to X. Apart from articles from eminent scientists, teachers, parents and students are being encouraged to send their articles/experiences/opinions to this magazine. A total of four issues were released during this year. The cover pages of the issues are shown below. Their contents are available on our website, “[www.navimumbaisciencefoundation.org](http://www.navimumbaisciencefoundation.org)”.



#### **XIV. Administrative Matters:**

During the period of this report, 12 monthly EC meetings were held where all the scientific activities of NMSF were taken up and discussed before & during their implementation. Due to COVID-19 issue, the monthly meeting of March 2020, was held via video conferencing. The Annual General Body Meeting (No.7) was held on Monday, 09 December 2019. Most of the members attended all these meetings.

#### **XV. Acknowledgements.**

Navi Mumbai Science Foundation feels profoundly grateful while acknowledging the whole hearted support it continues to receive from various agencies and organizations, without whom the above referred activities / events would not have materialized.

##### **The list of such organizations is as follows:**

- 1) Shree Gujarati Samaj, especially their office-bearers and Manager, Gujarati Samaj Bhavan.
- 2) New Horizon Public School, Airoli.
- 3) Karmaveer Bhaurao Patil (KBP) College, Vashi, its Management, Principal and Staff.
- 4) Fr. Agnel Multi-purpose School, Vashi, its Management, Principal and Staff.
- 5) Reliance Foundation School, KK, its Management, Principal and Staff.

**It may also be noted that the list of supporters for our activities / events is growing gradually and this point is more important for the future of the organization.**

##### **The financial support from the following organizations is gratefully acknowledged:**

- 1) Indian Association for Radiation Protection.
- 2) Atomic Energy Regulatory Board
- 3) Thane Janata Sahakari Bank Ltd.
- 4) Maharashtra Academy of Sciences (Mumbai Chapter).

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