

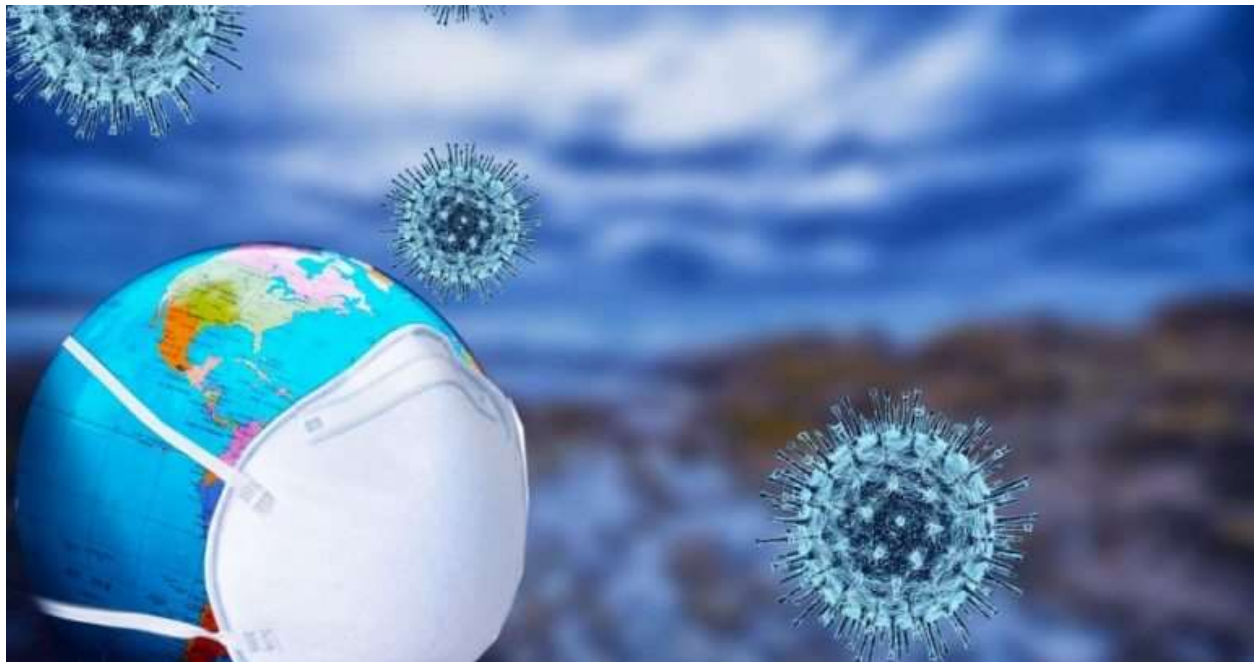
Navi Mumbai Science Foundation

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SAVING HUMANKIND FROM DEADLIEST PANDEMIC COVID-19



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This is a quarterly e-magazine published by Navi Mumbai Science Foundation, a society engaged in spreading science education and scientific temperament among students of Navi Mumbai region for last one decade. The magazine will cover all the activities of the society as well as articles on educating science to the students and teachers.



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Image courtesy: <https://www.newsabode.com>

Editor may not agree with the views expressed in the magazine

From Editor's Desk!!....



Coronavirus, the word has created havoc in everybody's mind all over the world during last six months. Now everybody has become aware about its seriousness, its symptoms, how to prevent the spread of the virus, social distancing, hand sanitization etc have become buzz words of every day. People are counting the number of positive cases like score of any match. The figures are changing by every hour and the disease being pandemic, the number doesn't have any significance as it spreads by its own to those coming in contact with it. This may not always follow the mathematical model but certainly we can say that the curve has either flattened or come down in most of the places.

To everyone's respite, as far as India is concerned, we have defiantly succeeded in slowing down the curve which was widely predicted in the initial stage of the pandemic. But story doesn't end here, the big battle lies still ahead, with the phase of easing the lockdown, challenges are far more serious than the present conditions. In view of monsoon approaching our doorstep and starting of educational year, we have to be very careful in handling the situation.

As per current issue of most prestigious Lancet journal, measures to flatten the curve might have an effect, but a lockdown only pushes the severe cases into the future —it will not prevent them. Admittedly, countries have managed to slow down spread so as not to overburden health-care systems, and, yes, effective drugs that save lives might soon be developed, but this pandemic is swift, and those drugs have to be developed, tested, and marketed quickly. Much hope is put in vaccines, but they will take time and it is not certain that vaccines will be very effective as well (Giesecke, May 2020).

Current phase of Covid 19 has been described world over by "defining moment" which we are witnessing for the first time. This moment has brought some positive changes also. There is considerable reduction in air pollution, improvement of water quality, free movement of wild animals around etc. So let us hope that the disease will bring humankind closer for fighting the pandemic.

A handwritten signature in purple ink, appearing to read 'YB Sharma'.

FIGHTING THE DEADLIEST PANDEMIC COVID-19

Friends, we are all going through a very difficult period. The world is facing a very difficult challenge in the form of the Covid-19 pandemic. I will give some suggestions to all of you to face this challenge at an individual level. Please remember that the pandemic has rapidly spread all over the world and fatality is also worrisome. The death rate from the virus is 3 to 4%. In a developed country like USA, there are more than lakh deaths in just 70 days. It's the death that people are scared and Covid-19 is no different from other infectious diseases.



Please note that this is another viral disease. However, there are two main reasons why the world is in such a rush to fight with it. Main reason is that the infectivity is very high and infection spreads very rapidly and the other reason is that the symptoms are very severe in patients with weakened immune systems. The medical fraternity's inability to treat patients with suitable medicine and absence of appropriate vaccine make the disease further scary. This is a novel corona virus which has not been observed before, hence the development of its vaccine, though possible, is expected to take a longer time, if it is even possible. We can fight with it. Let us prepare for this fight in proper spirit and accurate facts. With appropriate precautions, every individual can reduce the

risk of infection. If we remove the first cause responsible for the spread of this corona virus, then the remaining causes will just evaporate in thin air. We should be able to prevent it from spreading rapidly. So study the instructions below, and victory will be ours.

To prevent this infection, it is important to first understand exactly how it occurs. The virus spreads through the saliva or nasal passages or sneezes of a person who is a carrier or patient who has been showing symptoms of the viral infection. Very tiny droplets of saliva in the mouth or mucus in the nose are exhaled in large quantities while speaking or sneezing. These are the droplets where the virus rides. The size of droplets determines how far they will go. Ultra small droplets can travel up to a distance of about nine to twelve feet, while large droplets can get settled on surrounding objects at very short distances. If our hand touches these falling or settled droplets and the same hand touches your eyes, nose or mouth, or if those microscopic or ultra-microscopic mucus or saliva droplets in the air reach our lungs through our nose, we will be infected with this virus. Please remember that the virus is not transmitted through water or food. However, these droplets can settle on fruits and vegetables if the vendor or handler is infected, then they can serve as vehicles for the spread.

This implies that these mucous and saliva droplets are carriers of the virus and if these droplets are prevented from entering our nasal passage, further problems will not occur. Let us see how these vehicles can be stopped from reaching your nasal passage.

We breathe continuously through our nostrils. Even during sleep, our breathing continues. So it is not possible to stop breathing! You can stop going out of the safe premises of your residence for a reasonable period of time till the chain of virus is broken. That's what many countries tried to do it by locking down and restricting the people's movement. All kinds of travels came to a standstill. It has definitely helped our country in restricting the number of Covid 19 cases. However, lockdown cannot go on indefinitely. Self-imposed lock down by senior citizens, housewives and children for another 3-4 months will definitely help our country in recovering faster while allowing

the production units and business establishments to function. This will help building up our economy too.

Those who have to go out for work will have to take precautions. A sure shot precaution is, "You have to use a mask". We will face these viruses, learn to live with them and always remember that the mask will be useful for keeping these viruses away. Please observe following clauses carefully to accept this formidable vivid 20 challenge.

1. When you are leaving the house, wear a mask at the door of the house before opening the door. You can use government approved masks in the market or sew masks using old cotton cloths like t-shirts or banyans at home. Three or four layered masks will have to be stitched by allowing a small gap between the layers. A simple test to see if your mask is effective or not, cover a torch with this mask and switch on. If you cannot see the light of torch, mask is ok, otherwise add another layer.



2. These masks are going to be our **kavach_kundale** to protect us from the attack of coronavirus. Keep telling each other that this enemy will not be and cannot be underestimated. When applying the mask, make sure that there are no gaps anywhere. Note that the purpose of this mask is to get rid of the particles in the air that is inhaled through your nose while breathing. Due to the thin hair in the nose, it is filtered. Of course, the viruses are so small that they do not get caught in the

nasal hair. So it is very important to wear three to four layered masks to block the entry of coronaviruses. A mask should not be used continuously for longer if you are uncomfortable. You can change it. Also before applying the second mask, the first one should be soaked in hot soapy water without touching the outer surface. Even if you wear four or five masks a day, they will work, because you want to keep the deadly corona virus away.

- 3.** Make sure that the ventilation in the house is working properly. While it is true that there should be freely moving air in the house, we have to keep in mind that there are no corona patients around.
- 4.** There is no need to wear a mask when you are at home or alone in a closed car. But if you want someone to get into the car, just open the car door with a mask on and take him or her inside by making sure that the person is wearing a mask.
- 5.** In rickshaws, taxis, buses, cars, keep the doors open and use a mask when traveling with a third party. Do not remove the mask even for a few moments. Use public toilets only if you cannot avoid. Make sure the mask is properly tied when going there. Public toilets can be a source of corona virus as many people use it. So it is necessary to be very careful there. We can instill in the body a little habit of not having to go out for such needs. Urination and defecation in open places should strictly be avoided as this practice can spread many more diseases. Remember that this is the perfect time to start developing the habit of self-control so you do not have to use public toilets. It will work for short distance travels.
- 6.** Do not do any exercise wearing a mask. It is important to exercise, but do it in a safe environment and don't wear a mask at that time. If you choose to exercise outdoors, carry a mask and put it on if there are too many people around you or if interacting with someone (remember to keep distance).
- 7.** Please do not take off the mask while talking or if someone else is doing so please restrict them. It's okay not to talk, but don't lift your mask up or down when talking to someone else.
- 8.** Do not touch door handles, counters, bank notes, railings, chair handles, elevator buttons, wall, shared pens in the bank after going to a public place. Use sanitizers or

wash hands with soap if this happens by mistake. Do not touch your face with your hands.

- 9.** Older people, people with asthma, diabetes, heart diseases, blood pressure, kidney diseases and pregnant women should avoid going out of the house. We have learnt during recent lockdowns that we can live well even if we do not go out of the house. It will definitely be useful. Others should be excluded only if absolutely necessary until the corona virus has subsided. Maximum work should be done through the Internet to avoid going out.
- 10.** In public places such as banks, shops, markets, buses, stations, airports where you have to stand in line, keep at least six feet distance away from each other.
- 11.** Dip vegetables and fruits in water after bringing from market and wash your hands with soap thoroughly after that. The bags from which we bring the provisions and vegetables should be kept in the balcony or on the terrace or in any corner wherever possible without bringing them into the kitchen. Keep these packets in the balcony or any corner without disturbing for 72 hours and then use the contents.
- 12.** Clean milk bags externally using water and then wash your hands with soap.
- 13.** When you get home, take your shoes out of the house. Wash hands, feet and mouth with soap. In the event of an emergency or a suspected patient, wash and bathe separately.
- 14.** Shopkeepers / customers should wrap the new bank notes in the same paper and use them after three days. Wherever possible, make payment through Google Pay or Bhim apps. Insert and remove the debit card yourself, preferably without allowing handing it over to others. Don't keep your mobile phone, goggles, key chain etc on unknown surfaces and after coming home sanitize their objects.
- 15.** Shopkeepers should provide a separate box for keeping bank notes while taking these notes from customers. Customers can put money in that box.
- 16.** Avoid shaking hands. It is our culture to greet or say goodbye with folded hands. Remember it always.
- 17.** Many have the habit of touching their face or eyes or nose several times in a days. This should be avoided.

- 18.** If you notice any symptoms, show it to the nearest Fever Clinic / COVID OPD. It may be a simple illness but don't ignore it if it is a doctor's advice to test for Covid or corona virus. Avoid self-prescription of medications.
- 19.** Consistently use lemon, aonla (Indian gooseberry), orange, citrus fruits in your diet. Vegetarians should use tur dal, other pulses, cheese, paneer and lentils in their diet. This diet is good for boosting the immune system. Remember that simple diets like a simple daal, lemon ghee, rice, a couple of vegetables, bread and salad boosts your body's immune system and keeps you healthy. Lie down or expose yourself to mild sunlight for 15-20 minutes daily.
- 20.** Use of Aarogya-setu app as mandatory requirement by the government of India.
If we keep a positive approach, use our time effectively in doing constructive activities, keep away from spicy television channels which keep on hammering the scary news, I am sure we can handle this coronavirus and defeat it.
I can assure you that this 20-point program can save you from being infected with the SARS-Covid 19 virus.

Dr Sharad Pandurang Kale

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Image Curtsey <https://www.livemint.com/>

KNOWING THE NOVEL CORONA VIRUS

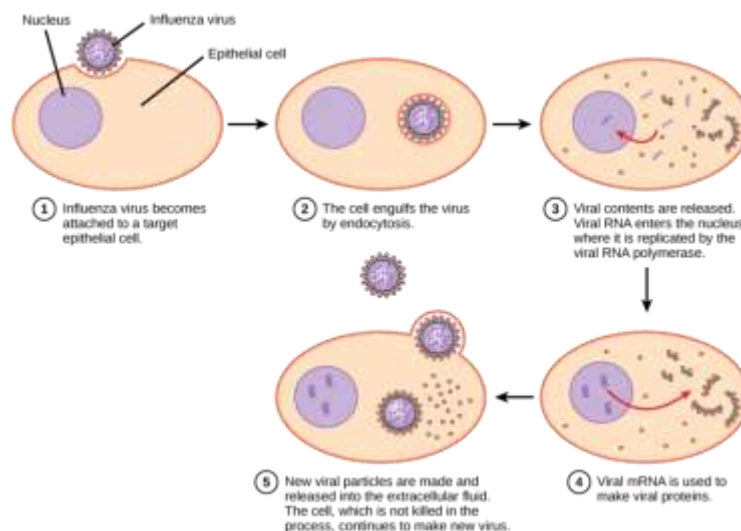
Today everybody is talking about the new corona virus. There have been many discussions and talks about handling this WHO declared pandemic in recent times. There also have been multiple claims of medicines for killing the corona virus. But can the corona virus actually be killed? The answer is no. The corona virus cannot be killed because it is not a living organism. We cannot kill a non-living thing, right? Then what exactly is the corona virus? In simple terms, corona virus is just a bio-particle. Just like a seed which is a non-living thing, but can produce lots of seeds when it is germinated in the soil, a virus upon entering a human cell produces many copies of itself. Rather it's not the virus that produces copies of itself, it is the inbuilt mechanism of the host cells that replicates the multiple copies of the virus.

Corona virus is a small particle having an RNA encapsulated inside a protective cover of proteins. The composition and physical structure of this protective protein and the spike like structures on its surface decide the infectibility and fate of the virus in human population. If the spikes on the surface of a virus match with any of the receptor on the surface of host cell, the cell gets infected with the virus. Our cells replicate the genetic material in our cells. When a virus enters inside the cell, our body misinterprets the RNA material of the virus as its own and starts copying and multiplying this RNA. Each new copy of this RNA then becomes a new virus and when the cell is full of such viruses, the viruses break the cell wall and attach themselves to other cells nearby. This process thus keeps on repeating in other cells as well. When a large number of cells get infected in this manner, the infected person falls sick.

Some viruses can cause genetic changes in the host DNA itself. This genetic change can be transferred in the future generations of the host. In fact, the origin of many viruses can be traced with help of these mutations in DNA in many animals.

As told earlier, since virus is not a living being, it cannot be treated with any traditional remedy. However, the virus can be destroyed mostly by destroying its external protein cover. This is why use of soap and sanitizer is recommended. The soap and sanitizer break the virus's protein cover, thus making it unable to infect.

Then the question arises, if virus cannot be killed, why are there so many trials going on in whole world for the production of coronavirus drug? Well, to understand how exactly an antiviral drug works, we firstly have to understand how a virus works. The virus firstly binds to the receptor on the surface of our cells and then seeps in to the cell through this place. Once inside the cell, the cell misidentifies the virus genetic material (RNA of corona virus) to be its own and starts replicating it. Each new replica becomes a new virus. When there is sufficient number of viruses produced in the cell, they break the cell wall to come out and infect other cells in similar fashion. An antiviral drug is a chemical that restricts the virus at any of the above-mentioned stages. It can restrict its entry into the cell, or stop it from replicating its genetic material, destroy its genetic material or resist them from coming out of the infected cell. The novel coronavirus is a new virus, so we don't know much about its proteins and mechanism of action. This is what is restricting us from making an effective antiviral drug that will disinfect the body. There also is no vaccine produced till date because the process of testing a vaccine takes long time for observing its effect on the tested humans.



https://commons.wikimedia.org/wiki/File:Figure_21_02_01.png

Mostly the viruses causing such pandemics originate in animals and then are passed into humans. But this is not as simple as it may sound. The viruses are very much host specific. Since the cells of different species have different structural and chemical properties it is very difficult for a virus to match with the cells in other species and

infect it. For a virus to pass on to other species requires genetic mutation in it. When such mutation occurs and it proves to be sustainable in other animal species, then only the other species can be infected. The novel corona virus shows very high similarity with the corona virus found in pangolin and bats. The genetic study on the virus has confirmed that this virus has been borne totally out of natural selection and cannot be produced in a lab artificially. It can be said that this virus mutated in bats and went into pangolins and after further mutation it jumped into the humans. Some theories also say that this virus could be a result of combination of two different viruses. But for now, all these are just theories. Since the novel corona virus is a very recent virus, we are yet to know many things about it.

For now, there is no evidence of transmission of the virus through any type of food: veg or non-veg. The transmission from human to the consumed animals also has not yet been observed. But it is a good practice to cook the food well to avoid possibility of transmission through contamination if any. Fortunately, we can avoid the infection by simple care. Wash the hands with soap and water for at least 20 seconds, or use sanitizer if no soap and water is available. Avoid touching any surface, put a mask covering the nose and mouth and strictly maintain physical distancing of at least 6 feet. The fatality rate for Covid-19 as declared by WHO in March 2020 was 3.4%. When we compare this rate to SARS which had fatality rate of 10% and MERS which had fatality rate of 34%, Covid-19 seems to be much less harmful than these two. Normally a viral disease which is more fatal is less infectious and vice versa. The possibility of recovery in corona virus infection is much higher. The fatality is very low in children and adults below age of 50. The old people and people with other illness are at more risk than others. However, most of the people get well without showing any symptom.

So, we should not panic about the corona virus and just have to take good care and follow the hygiene and behavioural practices as suggested time to time by the official agencies to protect ourselves from this disease.

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NAVI MUMBAI SCIENCE FOUNDATION'S SCIENCE UTSAV: AN OVERVIEW

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. Science Utsav is one of the major two-day yearly activities being conducted by NMSF since 2012. The venue for this event is Gujarat Samaj Bhavan, Sector 15, Vashi, Navi Mumbai (courtesy, Shree Gujarati Samaj, Navi Mumbai). The event is organized in association with Shree Gujarati Samaj, Vashi. The first day is dedicated to Teachers' Conference and it involves science teaching faculty of schools. The second day is dedicated to an exhibition of science experiments where students demonstrate their experimental skills.

DAY-1 TEACHERS' CONFERENCE

This conference is primarily meant for secondary school science teachers mostly from Navi Mumbai area. Every year, a new theme is set forth to trigger the imagination of the teaching community. The main and sub-themes are selected with guidance from Homi Bhabha Centre for Science Education [HBCSE (TIFR)], Mankhurd, Mumbai. NMSF organizes this event to bring the practicing teachers together on a single platform and pool their innovative ideas, arising from their valuable practical experience, for the benefit of the entire teaching community. In the process, teachers learn/express their new ideas/practices of teaching and discuss their problems in an open forum. The ideas expressed and presented in the form of papers/essays are brought out in the form of proceedings which are also published on the organizations homepage (**www.navimumbaisciencefoundation.org**).

The participating teachers belong to different streams. i. e. Navi Mumbai Municipal Corporation schools, Government aided schools and private schools. They present their papers during this conference. Eminent teaching professionals are also invited to deliver

invited talks on main and sub-themes. Efforts are also made to honour President's medal awardee teachers, during the conference. Their presence lends an elegance of a different kind altogether to the conference.

Teachers' Conference is thus the only platform in Navi Mumbai for secondary school teachers to share their teaching experiences, knowledge and teaching methods by way of participation. - This is an excellent opportunity created by NMSF to bring out hidden talents of the teachers.



Photo: Dr Kalpana Kharade, Chief Guest being honoured by Dr Bhagwat during Teachers Conference 2020.

The main and sub-themes of Teachers' Conferences conducted so far are given in the form of a table below. Their proceedings form a "**mini treasure trove**" of information for any aspiring teacher at the beginning of his career.

Following table gives overview of the year-wise list of themes & sub-themes of Teachers' Conferences.

Year	Main theme	Sub themes
2012	Hands-on Science in Schools	<ul style="list-style-type: none"> a) Inexpensive science kits for demonstration b) Practical classroom management techniques c) New experiments for inclusion in the class d) Measurement tools as a part of class room accessories e) Day to day objects as tools of learning science
2013	Project Based Science Learning	<ul style="list-style-type: none"> a) Inexpensive kits for project works b) Keeping the relevance and focus of the projects c) Practical project management techniques d) Measurement and numerical output of the projects e) Day to day objects as tools of learning science
2014	Demonstration of Science Experiments in High Schools	<ul style="list-style-type: none"> a) Inexpensive Science kits for demonstration b) New experiments for inclusion in the class c) Practical classroom management techniques d) Measurement tools as a part of classroom accessories e) Day to day objects as tools of demonstrating science
2015	Collaborative Learning: A Useful Teaching-Learning Method	<ul style="list-style-type: none"> a) Elements of collaborative learning, methodology for implementation and assessment b) Collaborative Learning Experiences through interactions (Teacher-Teacher, Teacher-Student, Student-Student and Teacher-Parent) c) Experiences in planning and conducting collaborative learning during scientific investigations (experiments)

		<p>d) Experiences in planning and conducting collaborative learning during scientific enquiry in class rooms</p> <p>e) Assessment of collaborative learning and examples of evidence of learning.</p>
2016	Encouraging and Supporting students' thinking in class room learning/teaching of science.	<p>a) Handling of Students' common errors and related doubts.</p> <p>b) Encouraging involvement of non-participating students.</p> <p>c) Using students' out of school experience.</p> <p>d) Impact of language barrier on science learning, if any.</p>
2017	Use of ICT in Teaching-Learning Process	<p>a) Using new technology in classrooms</p> <p>b) Creating e-materials /e-teaching aids</p> <p>c) Using ICT in student projects</p> <p>d) Computer based assessment</p> <p>e) Social and Cultural aspects of using ICT in teaching learning</p> <p>f) Issues of equity and equal access with in ICT</p>
2018	Moving towards a better understanding of the environment	<p>a) Environment related projects undertaken by the schools/teachers/students</p> <p>b) Students' ideas on environment related concepts:</p> <p>c) Relationship between students' background (gender, place of stay, region, cultural background) and environment related issues</p> <p>d) Evaluating students' awareness about the environment over the schooling years and teacher's reflections</p> <p>e) Outreach activities related to environment taken up by</p>

		<p>students/teachers/schools</p> <p>f) Innovative strategies or material development to teach environment related topics in schools</p>
2019	Pedagogy of science education	<p>a) Understanding our learners</p> <p>b) Learning environment in the classroom</p> <p>c) Role of subject matter knowledge in teaching science</p> <p>d) Teaching strategies for science</p>
2020	Effective science teaching-learning strategies for classrooms	<p>a) Designing engaging learning tasks for classrooms</p> <p>b) Active learning strategies: their development and use</p> <p>c) Action research, interventions and experiments in science education in classrooms</p> <p>d) Dealing with diversities in classrooms</p> <p>e) Reporting learning episodes from classrooms</p> <p>f) Teacher collaborations for effectiveness in classrooms</p> <p>g) Taking note of students' informal ideas in the classroom.</p>

DAY 2: EXHIBITION OF SCIENCE EXPERIMENTS

Most of the present-day students are very good in theory but lag behind in their experimental skills. A platform is therefore needed which will draw students' attention and encourage them to concentrate on their experimental skills as well. This event precisely fulfills that need. It is thus very much different from project/model-based exhibitions which are becoming the order of the day. Here, the students have to conduct their respective experiments and show the results to the Judges/Public. Experimental demonstrations are essential to understand the basic concepts of science. As the experiments are conducted in small groups, it improves both individual as well as collective skills. In turn it also leads to improved communication skills, etc. This initiative of NMSF has provided a pathway to groom and inspire the students in efforts to improve their experimental skills. Demonstration of physics principles by eminent personalities is also part of this exercise. A good number of schools encourage their students to take part in this exhibition each year.

Several leading scientific organizations (some voluntary), take pride in setting up their demonstration stalls, during the event, for the benefit of participating students. Their utility can be judged by their crowd-pulling abilities. They include:

1. Homi Bhabha Centre for Science Education (HBCSE, TIFR)
2. Science through toys by Prof. R. D. Kavathekar
3. Origami-Thane
4. Nehru Science Centre
5. Bombay Natural History Society.

Prize Distribution: NMSF organizes several scientific activities during any given academic year. The winners of these activities are honoured with suitable prizes during this grand event.

GLIMPSES OF EARLIER SCIENCE UTSAV



Chief Guest making his presentation during Teachers' Conference.



A session of one of the Teachers' Conference in progress.



Exhibition of Science Experiments: Engrossed participants.



Exhibition of Science Experiments: A curious parent.



Judges interacting with a student group.



Navi Mumbai Mayor Hon Shri Sudhakar Sonawane at the ORIGAMI demonstration desk during Science Utsav programme on 7th February 2016.

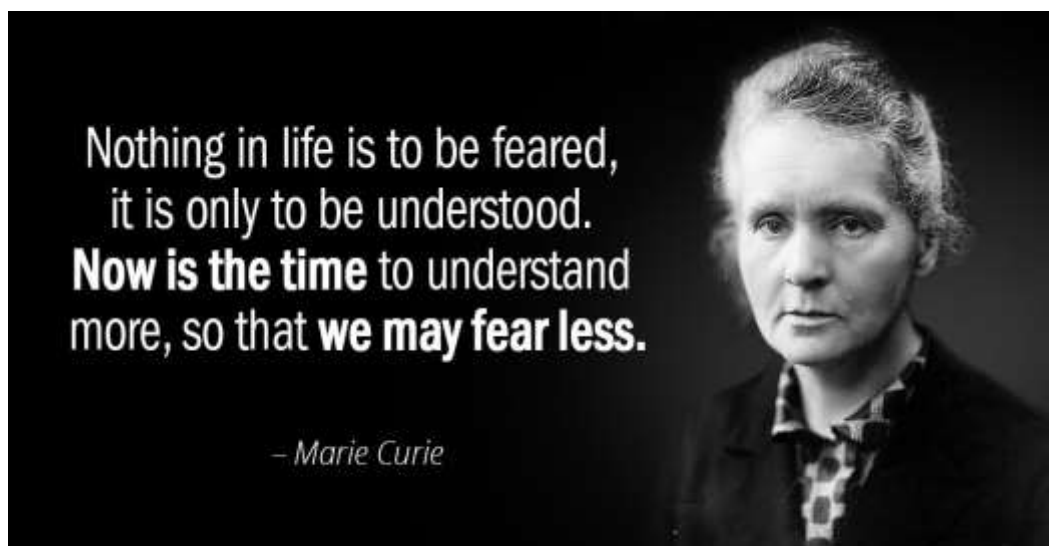


Exhibition of Science Experiments: Enthusiastic participants.

Article compiled by

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Dr DAR Babu babudar13@rediffmail.com



Students Corner...



Knowledge is the key to success in life. Benjamin Franklin once said "*An investment in knowledge pays the best interest*". How very true that is. No matter what happens, the one thing that can't be taken from you is your mind and the knowledge in it along with the wisdom that bore from that knowledge.

Competitive exams enhance the skill of understanding the application of concepts. It develops IQ, logical and analytical thinking and build a strong foundation for a career. Exams help a lot to bring an improvement in the individual's knowledge because they provide regular feedback to the students who acknowledge their shortcomings and work on them. I feel that every child should participate in maximum number of exams. Even if he/she is not able to achieve anything now, the knowledge obtained, insights gained would be useful somewhere or the other in future.

Homi Bhabha Balvaidnyanik is one such competitive examination which is conducted by The Greater Bombay Science Teachers' Association since 1981 to encourage students to take interest in science, to inculcate scientific attitude and to search science talent in students and motive them towards basic science.

I had appeared for class-VI Homi Bhabha Balvaidnyanik Exam in 2019-20. For 1st level I read all the chapters of science from NCERT books and other such references in addition to the exhaustive lectures and guidance imparted by the teachers of Navi Mumbai Science Foundation. For 2nd level I also joined the practical sessions conducted by Navi Mumbai Science Foundation which was indeed helpful to enhance my practical knowledge and also got a scope to conduct experiments. For 3rd level every year one action research project is given and I worked on it and prepared myself for the interview.

Achieving success in exams, obviously makes one happier. I had prepared hard and finally achieved my goal. I understood that if you work hard enough for something, you will certainly achieve it. Dreams don't work unless you do. I would like to conclude my write up by quoting words of Audrey Hepburn – *"Nothing is impossible. The word itself says 'I'm Possible'".*

Kaushambi Mitra

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DON'T MISS IT.....
COMING UP IN NEXT ISSUE No 2
(July to September 2020)

- 1. AFTER COVID 19, INDIA'S NEXT CHALLENGE IS LOCUST SWARM!!**
- 2. STATUS OF ENVIRONMENT AFTER LOCKDOWN**
- 3. NMSF NATIONAL SCIENCE DAY CELEBRATION**
- 4. STUDENT'S CORNER**
- 5. TEACHER'S PAGE**
- 6. PARENT'S VIEWS**



DO YOU HAVE A INTERESTING EDUCATIONAL STORY???
SHARE WITH US!!!!

NMSF EVENTS CALENDAR 2020

January							February							March						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
			1	2	3	4							1	1	2	3	4	5	6	7
5	6	7	8	9	10	11	2	3	4	5	6	7	8	8	9	10	11	12	13	14
12	13	14	15	16	17	18	9	10	11	12	13	14	15	15	16	17	18	19	20	21
19	20	21	22	23	24	25	16	17	18	19	20	21	22	22	23	24	25	26	27	28
26	27	28	29	30	31		23	24	25	26	27	28	29	29	30	31				

Science Utsav

National Science Day

Fun with Science from 15 Feb to 15 March

Pre-RMO

April							May							June							
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	
			1	2	3	4						1	2			1	2	3	4	5	6
5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13	
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19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27	
26	27	28	29	30			24	25	26	27	28	29	30	28	29	30					
							31														

HBBVC Classes April to September (except May) every Sunday

July							August							September						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
			1	2	3	4							1			1	2	3	4	5
5	6	7	8	9	10	11	2	3	4	5	6	7	8	6	7	8	9	10	11	12
12	13	14	15	16	17	18	9	10	11	12	13	14	15	13	14	15	16	17	18	19
19	20	21	22	23	24	25	16	17	18	19	20	21	22	20	21	22	23	24	25	26
26	27	28	29	30	31		23	24	25	26	27	28	29	27	28	29	30			
							30	31												

RMO & Science Club every Sunday

Nobel Laureatim writing

October							November							December						
Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa	Su	M	Tu	W	Th	F	Sa
				1	2	3	1	2	3	4	5	6	7			1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

Children Science Congress

HBBVC practicals full day

World Nuclear Energy Day

