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SDECTION SCIENCE JOURNAL

Editor's Note

2020 is long gone, we are in the midst of 2021 and yet this pandemic is nowhere near its end.

With all of us thriving and barely holding on to our lives, with us struggling to keep up with all of the sadness and grief, The Spectrum hopes to bring to you all the beneficial and efficacious occurrences that made our stay at home worthwhile. With frequent family zoom calls, finding solace in social media and giving online exams, the science journal wants to take you back to the early days of the pandemic. My team hopes to bring some positivity into your lives, some happiness. I present to you the summer semester edition of Spectrum, The AVS science journal, I hope you have a wonderful read.

Regards,

Adrija Das

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JOURNEY OF THE UNEXPECTED

by Anam Aviva, XII

"Oh 2019! what a tragic year!" that is what I said back then. I could not wait for trigonometry, analytical chemistry and physics to get over for life but then comes 2020, starting with the Australian fires and covid-19. We were half-way through our 10th boards but then comes lockdown 2020 (which we thought would last only for 15 days), little did we know that we would still be in a state of lockdown till 2021, 2020 was the year I was supposed to be at my best, living one of the golden years of my life but coronavirus, "RONA" virus, ruined it. It was a brutal yet an eye-opening year. Millions of deaths, unemployment, a person's mental health going completely down to the core of this earth, uncertainty, family problems, I do not know how people went through these tough times. People going crazy being stuck between the walls of their house. The first month went by and that is when the American app, Zoom came into power and on the other hand, most of our only source of entertainment, TIKTOK got banned due to security reasons. LIFE IS CRAZY, YOU HAVE TO EXPECT THE UNEXPECTED TO HAVE FUN and that is what I believe. In the year 2020, I had learned to live, I knew how to survive but I had become a

professional procrastinator. I did learn a lot, there were many conferences that attended various international and Ι national conferences online that would normally be impossible. I am pretty sure most of us learned how to bake cakes this pandemic, if not most of us ate cakes. A year away from school, at home, food was not bad at least we got to have non-vegetarian food on a Tuesday but we missed out on all the fun which we were supposed to have in school with our friends. So, what was eye-opening? people. People who kept in touch despite the norms of this pandemic. A year passed by and then comes 2021. We finally got to meet our friends although we had to give offline promotional exams. We were with our own people. Friends!! rather family, extended family. As soon as school reopened, we had our Inter-house Basketball tournament which we won, followed by many other Inter-house competitions. Once again I relived one of the best days of my LIFE. Life was going pretty well until April and here we go again another lockdown. Life took a turn again. My suggestion to everyone reading this article, if you have the opportunity to live life, live it to the fullest. Do not wait for tomorrow. You never know what will happen next.

THE ZEAL

by Kaustav B. Arya, XII

The breath has been polluted, The joy is again diluted, You took our innocent people away, Oh Virus! Irony! We could already see ray.

Inception was tough, aah! Still dreadul view First, clueless to find a way through Absolute havoc, loss of hope But yet again, skill of human rises to cope.

Oh Virus! You couldn't let us down Your ill vision won't take over our will, the wisdom sound The devastation made us even more resilient Huh! Your aim's getting turned upside down with minds brilliant.

.....We stayed. The human legacy will be upheld again. Ever grounded!

The more you tortured, the more we fought The more you killed, the more we lived The more you dared, the more we became brave The more you shut doors, the more we found other ways out.

Started with shivering by fear, We've come a long way humans, oh dear! Beyond this painful ocean, there's the beautiful shore Nothing but sheer bravery. Again, let science roar!



SPECTRUM VOLUME-II 1ST EDITION

CORONA: ONE SHOT WONDER

by Anikaith Joshi, IX

How I was born I was unsure of myself; all I know is that I was born in either a lab or eaten along with a bat. And then I spread. In the beginning, it was very boring, very slow, but then I reached the airport, and that's when the fun began. You see, I am a disease that spreads through mucus and what better place to spread than a dirty airport. It was paradise. Then I reached America. America, where I spread so easily, I felt like I was a God. Then they learnt that I was there. Hiding, creeping, infecting. That is when my glory days started. I spread like wildfire, infecting everyone I could. People did not know what to do with me, they did not wear masks, thinking that it was all a joke. How stupid they were.

Long gone were the days of sneaking, it was time to rampage. Everything had to be shut down. People lost their livelihoods. No one could go anywhere, as I spread faster and faster the scientists tried to find a way to check me, they couldn't; until they could. The humans began to fight back. They sterilized everything, began to wear their masks, they tried to find cures. I fought back, desperate now, but it was of no use. Vaccines were born, lockdowns lifted, and although I will fight to my last breath, battered and bruised, I will still lose, so think of this as my testament, my final message, my legacy.



ON WORLD MUSIC DAY 21ST JUNE by Anvita Dey, X



BRAIN GYM

by Neha Swabnam, XII and Christine Houmai, XII

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QUESTIONS:

- 1. Where was the first case of the novel corona virus identified in?
- 2. Name one initial symptom of COVID-19.
- 3. At present, which is the country most affected by the virus?
- 4. Name a clinical trial in which blood is transfused from recovered COVID-19 patients to COVID-19 patients that are still in critical conditions.
- 5. Name one other virus that is related to COVID-19.
- 6. What was the last continent to be affected by the virus?

Picture credits: Google

SMALL MILESTONES

by Angelica Saikia, XI

I am pretty fortunate right now. If I was not, I would probably be in a hospital ward fighting an odd disease that has seemed to turn everything upside down, instead of sitting down in my study space in peace and writing down this article.

Everyday the news has something new to say, only not always promising. Nonetheless, life goes on. At first when the news of COVID-19 spread and everything shut down immediately, every place, every institution, it was complete chaos for everyone, a very sudden change but the only issue I had to deal with was school works. My only responsibility was to attend my 'online' classes religiously and complete all tasks on time. Compared to how I would have taken it a year ago, it rather looks like a privilege to me now. I have nothing more to worry about, unlike the doctors who are still going out to work amidst such a catastrophe, who along with the other hospital staff and the patients themselves are fighting endlessly daily, to end such a deadly war. While countries' authorities are fighting daily to protect and preserve their citizens at all costs, schools and colleges are also fighting to provide all the educational experiences to their students 'online'. Today having a shelter, food to eat, people to call my own, a 'life' is very luxurious. Until a few days ago, opening any news channel was almost like a nightmare. The other day over a tutorial meeting, I noticed I was not the only one stressed about the whole global crisis. Staying updated with the world's situations had bitter effects on everyone differently.

However it is only a time, it will pass someday, everything it has brought is not unpleasant either. After all the world has progressed too. Prepared in a lab or not, the coronavirus has made us more aware of the earth, its nature and the power it possesses and enjoys over all of us regardless of all the scientific and intellectual power of humans. Yet these changes cannot defeat a man so it makes him stronger.

Medical science has advanced and improved so much over time and this virus and its havoc are but an opportunity for more discoveries and growth of mankind. Scientists learn new possibilities every day. Learning is the root of growth and although challenging, this mere war has provided for more learning to happen, scientifically, mentally as well as spiritually for each person.

This pandemic has caused everyone to almost shut down completely, stay home quarantined throughout the day. However, staying this way has brought so many positive changes in people's lives too. Those who have embraced this new life, see it as an opportunity for personal growth. Staying cut off from the crowd and the noise has got more people to connect on a deeper level with nature, to see beauty in every little thing at its purest, realise how little things can make a day, set a soul free from its cage. Time alone for those who appreciate and respect it has been a blessing. For everyone, it is a new chance the world has given to start again, to sit back, breathe and begin with hope all over again, connect with the families, repair old broken bonds and discover new things. When this time will be gone, people will realise they have discovered a lot about themselves and the environment around them. They would appreciate the awakening they have not noticed yet. From learning new skills to learning about the self, time would have passed and it would be a fruitful experience. Once we accept the time as it is, people will find a hope to hold on to and the faith to fight this subtle war with. Just hope is enough to build discipline and courage in someone and it is all the world needs right now. Almost a hundred and fifty thousand years ago, humans almost faced extinction during the 'icedesert' stage. It is believed that the population shrank down to almost only 600 people around the world. Yet, we survived, humans have lived for a long time, been through worse and it proves that all it takes is courage and faith to live. Preparation begins with preparing the mind and COVID is but a test that we are soon to pass.

SCIENCE INNOVATION AND DESIGN TECHNOLOGY



A USEFUL PROTOTYPE FOR UPCOMING SUMMERS:

A FIRE FIGHTING ROBOT USING AN INFRARED SENSOR

According to National Crime Records Bureau (NCRB), it is estimated that more than 1.2 lakh died in fire accidents 2010-2014. Firefighters have to take an immense risk to put out fires and rescue people. With the advancement of technology especially in Robotics, it is possible to replace human beings with robots for highrisk tasks. This would make firefighting safe and more efficient.

This is a concept of a firefighting robot that can automatically detect the location of the fire, move towards it and spray it with water. The heart of the robot is an Infrared sensor that can detect radiation from a fire. The robot moves towards the fire and when it is near (the radiation crosses a certain threshold), the water pump turns on and it starts spraying water on the fire.

Instead of water, the robot can be modified to carry foam or carbon-dioxide to fight oil and electrical fires respectively. This robot can be effectively used in dangerous situations which can be high risk to firefighters. by Rayyan Hazarika, Ex-Aviator

The main components of the robot:

- Infrared Sensor
- Microcontroller (Arduino Uno board)
- Water Tank and Pump
- Motors (4), Wheels (2) and Tracks (2)
- Metal Chassis
- Batteries and Connecting wires

SCIENCE FICTION

THE UNDEAD

by Angelica Saikia, XI

I do not know my own history yet history would know me. I do not know how I came into existence. All I know, it was in the body of 'the man' that I felt the most alive. How powerful and invincible his flesh made me feel. I had known what I was capable of until I had the human. Suddenly I could feel, I could control, I could do anything. It felt like I had all the freedom, all the time in the world to do whatever pleased me, the human was all mine. I had never felt so powerful, like nothing could beat me. I took complete control until the human was totally drunk, vulnerable and compelled to do whatever I wished. His warm blood made my cold body want more. The human let me have more. After him, it was his friend, then his mother, now I have survived on more than a thousand bodies. It is the body of the Homo sapiens, it is capable of wonders and I am capable of siphoning these wonders. Oh! Time is invincible, so am I. It felt like a blessing but little had I known time is a curse. I would have to live with all the guilt that was building up every time I possessed another body. Forever scared me. I was lonely, over time I created more of my kind. More and more out of having to escape the guilt of all the havoc I wreaked on countless innocents. This guilt is drowning me. How unguided and naïve I was. I am so ashamed of what I have become, I cannot dare to look back and see all I have done, who I have hurt. I cannot face myself. I keep running, I keep changing. I have the power to mutate and change form but not die. I had the human drunk but now I am. I am scared and guilty. I have become the talk of the world, the biggest mystery that has ever happened. I wish I could stop surviving on the human but otherwise I would be frozen and locked up in my coffin. The stupid human does not understand, the more I am introduced to his kind, the stronger my lust grows. I want it to end as much as you humans do. I do not mean to blame on you but you have all the responsibility, you are responsible for my existence, my immortality. All you can do now is stay shut inside and distanced. You do not owe me anything so, do yourself a favour and let me die peacefully once and for all. I promise you peace if you promise to take care of yourself and protect yourself. Yours sincerely,

The corona virus.

9|

Picture credits: Google

ONE SHOT VACCINE

Coronavirus

Vaccine

by Christine Houmai, XII

Hi! I'm Sputnik V, I was born in Russia on the 11th of August 2020. I am still yet to turn a year old, but I have already contributed so much to this world. As you all may or may not know, the horrid corona virus, my rival, spread its infectious negative aura all around the world in such a short span of time. It tore apart so many families, it took away so many lives all across the world, it even reached the furthest corners of the world. It did all this without even feeling an ounce of guilt or pain. How much more selfish can it get! Just when everyone thought the apocalypse was nearing, that was when I had come into action to save the day.

You see, I was and still am the revolutionary one-shot vaccine that Russia's ministry of health had given birth to. I was approved for distribution in Russia and then I had been distributed in 59 other countries as of April, 2021. As of now, I am lending a helping hand to people of the age 18 and above, but the health ministries across the world are still in the midst of preparing the birth of another vaccine which will be able to lend a helping hand to people of all age groups.

Coronavirus

Vaccine

My far far relatives Pfizer and Moderna have also been lending a helping hand to people across the globe especially to pregnant women as they are at a higher risk and in a very fragile state, physically and mentally.

In conclusion, I promise to the people of this so-called earth that by the end of the year 2021, we the vaccines, will eradicate this deadly infectious disease which calls itself Corona and bring back peace and harmony to this earth, we will ensure that normalcy in everyone's lives and homes will be brought back as if this pandemic never took place at all.

Signing off, until we fulfill this promise. Till then, stay at home and get the vaccine at your turn.

SPECTRUM VOLUME-II 1ST EDITION

Picture credits: Google

A 999 STERLING SILVER LINING

by Donoven Figg, XI

They say that when God shuts a door, he opens another one. If he doesn't open a door, he opens a window. Humans, as a species capable of intelligent thought should realise that there does exist a workaround to this: reach out and reopen the closed door. That's how doors work people.

The pandemic blindsided most of the world- and it also exposed the holes we have in our respective safety nets. Newton said, "every action has an equal and opposite reaction". The same will hold true for COVID: good accompanies the bad. Of course, there will never be a perfect balance between the two; even the earth is disbalanced at 23.5 degrees.

There will always be differing viewpoints on COVID: for the privileged there will be little to no effect except maybe a touch of annoyance at not being able to continue with their day-to-day pleasures. For the bourgeoisie, there will be some ini-tial adapting hiccups, but they too will eventually adjust. The people who will be hit the hardest are daily wage earners and the lower proletariat.

Every news channel is running bulletins of the mounting death toll, infection rates, virality percentage of the virus. An important distinction is that COVID is viral -- not lethal. This translates to "the virus spreads fast, but isn't (comparatively) deadly". When you compare COVID to, say, SARS, MERS-CoV, or EVD-27 (ebola), the difference becomes stark. I have heard countless people say "when COVID is over". COVID will never be "over" in the general sense of the word: Ebola was never eradicated. SARS was never eradicated. In fact, viruses like Marburg, Hanta, HiV, Influenza, Rota, Dengue, SARS-CoV-2 (upgrade!) are still pretty rampant. The reason that their death toll is negligible is because people have developed a herd-immunity to said viruses.

The same thing is likely to happen with the coronavirus disease: a particular deadly strain of the coronavirus family. Its siblings, MERS and SARS seem paltry when compared with its mutation rate and virality.

Now let's have some good. Reduced traffic on roads due to lockdown restrictions has led to CO2 and CH4 emissions in developed countries. For example, New Delhi's air index improved for the first time in the better part of a decade after the second lockdown was imposed there.

Social distancing and lockdown procedures have eased the pressure on the fauna of locales as this supports the breeding of species sensitive to human presence. A good example of this would be the reappearance of the passer domesticus and paris major sparrows in urbanized areas. Their population had been steadily on the decline for the past few years.

The common crow (corvus splendens) is also making a staggered re-entry into the population. Ocean oxygen levels have also increased by about a tenth of a percent according to the IUCN and UNFCCC.

The pandemic has also educated the masses better than any awareness drive ever conducted: people in the backwaters of the world now know the importance of disinfectant soaps and why washing hands is important.

COVID has also led to a mass shift in perspective on how the public views free trade. New agrarian policies (think: Farm2Fork) and economic agreements (IND-SLK SAARC corridor + IND-ECD JETCO) are also being rapidly finalized with deals to prop up each other's markets being inked.

There can be no doubt that COVID-19 is a pretty deadly plague. But with this thundercloud comes a silver lining: and this lining is, at minimum, 999 sterling.

YOGA, IMMUNITY AND HEALTHY WAY OF LIFE...

by Pratiti Barua, IX

Wherever you go today, you hear people talking about the multiple benefits of yoga and attesting to its indispensability in daily life. It is no surprise, considering the significance of yoga in the resolution of physical and mental problems all over the world today. Yoga has its roots in India. It is said to be a gift to the rest of the world. People across the globe celebrate International Yoga Day on the 21st of June every year.

When you hear the word 'yoga', chances are that an image of people twisting in, seemingly, impossible poses may pop into your head. Perhaps you never dreamt that any non-acrobat could bend and twist like that!

While yoga asanas are immensely effective and helpful, yoga is more than the asanas or poses it is known for today. It is, also, not just a passing modern fad that evolved over the last few decades. The fact is that it dates back as far as a few millenniums! Yes, incredible as it may sound, yoga goes way back to BC times. So, it is no wonder that so many around the world are attracted to such a time-tested practice.



ongoing coronavirus During this pandemic, when we are all bound to live a restricted life under the constant fear of infection risks, it is natural for anyone to develop anxiety. The continuous flow of negative news, the inadequacy of daily resources, everything is adding to this growing anxiety and depression. Being confined at home for such long periods of time, can be mentally challenging for us. When our mind is flooded with the uncertainty of the future, we often experience sleepless nights causing fatigue. Many of us are unable to relax our mind during this time thereby increasing the stress on our minds.

During this time, it is important to understand that mental health is particularly important for survival. To help with this growing level of anxiety and depression, we must lead a healthy lifestyle, stay connected to our loved ones, and practice yoga at home.

Studies of yoga's effects on quality of life and depression:

Yoga has been shown to enhance quality of life in people who are healthy and ill. A review study found that yoga is as effective or better than exercise at improving a variety of mental and physical health measures such as stress, quality of life, mood states, heart rate variability, pulmonary function and so on. A meta-analysis concluded that because weight gain and toxicity are side effects of various pharmacotherapies, yoga may be an effective and less toxic auxiliary treatment for severe mental illness. In one study yoga improved subjective wellbeing, mental health, and executive functioning within prison populations.

Patients' Experiences with Yoga: Connectedness and shared experience with others

"The shared experience was important for coping shared consciousness was there, when everyone was there together it makes you feel a feeling of connectedness of everything. You walk out of there feeling in touch with the condition of others, not just what is going on with me, but what is going on with everything, which is very reassuring. When you are in a depressed state, you feel very alone but feeling whole and part of a whole is where the value is really is."

Coping with stress and ruminations

"I feel good about myself more often than before the yoga. I learned to focus on the positive, instead of what I did wrong, didn't do, or can't do anything about anyway."

Empowerment and competence

"It gives me motivation to try other things that I might not have tried before it gave me a sense that 'I can do it; I can do this for myself.

Conclusion:

The practice of yoga shows promise for promoting better population mental health. It is acceptable, accessible, costeffective and encourages self-reliance. Yoga is an individual health promoting practice that can be done in groups and supported by communities. Like other holistic practices such as tai chi, qigong, meditation and so forth, it includes a community component. Practicing yoga together, in workplaces, schools and other group settings have shown to promote population mental health. While yoga does not address the social determinants of mental illness it does promote a greater sense of inner peace for those who partake.

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HISTORY OF PANDEMICS

by Ankita Sarkar, XI

As the global community confronts the COVID-19 pandemic, access to knowledge and research is more urgent than ever. The COVID-19 crisis certainly feels unprecedented and in most ways it is. Never has the world faced a health crisis that has moved so quickly across continents, overwhelming complex health care systems and putting entire economics on hold. However. This is not the first pandemic the globe has faced and it likely won't be the last one too. Yet, humanity has stood together on the principle of many such uncertainties caused by different unrelenting viruses.

As a student community, we should know the dire effects of such pandemics. There have been many such horrendous pandemics and epidemics which have managed to shake the entire world in absolute terror. And yet again, we are facing such situations where we all are compelled to stay put in our houses, social distancing due to the COVID-19 pandemic. This brings me to the first element of this article," What is a Pandemic?". We all have heard people around us saying that the COVID-19 is a pandemic, however, how is it different from an Epidemic? AN EPIDEMIC is a disease that affects a large number of people within a community, population, or region.

PANDEMIC is an epidemic that's spread over multiple countries or continents.

1. THE ANTONINE PLAGUE (165 AD to 180 AD)-

Also referred to as the Plague of Galen. Affecting the entirety of Roman Empire.

Affected Areas: Asia Minor, Greece, Italy. The disease was brought back to Rome by soldiers returning from Mesopotamia. Historians and scientists predict is to be measles or smallpox.

Symptoms - Fever, diarrhoea, vomiting, swollen throat, coughing.

Gelen noted that diarrhoea appeared blackish which suggested gastrointestinal bleeding.

2. THE CYPRIAN PLAGUE (249 AD to 262 AD)-

Named after the best-known chronicler, Cyprian, Bishop of Carthage. Highly contagious disease, transmitted both by direct and indirect contact.

Symptoms - Bouts of diarrhoea, contiguous vomiting, fever, blindness, paral-ysis of their legs and feet, swollen throat and blood filled eyes while staining their mouths.

3. JUSTINIAN PLAGUE (541 AD to 549 AD)-

Affected Areas: Europe, West Asia Outbreak of bubonic plague

Symptoms - Fever, headache, chills, swollen or tender lymph nodes, abdominal pain, gangne.

4. BLACK DEATH (1346 to 1353)-

Affected Areas: Europe, Asia, North America Due to bubonic plague.

Spread by a bacillus called Yersinia pestis.

Symptoms - Blood & puss seeped out of strange swellings, followed by fever, diarrhoea, terrible aches, pains and then in short order, death.

5. CHOLERA PANDEMICS (1817 to 1975)-

Vaccines are now available, though they pro-vide only 65% immunity. Said to have originated in Kolkata, India. Seven pandemics have occurred in the last 200 years.Worldwide spread.

Symptoms - Diarrhoea, vomiting, leg cramps.

6. THIRD PLAGUE PANDEMIC (1855 to 1960)-

Worldwide spread. Due to bubonic plague. Said to have originated in Yuman, China.

Symptoms - Fever & chills, extreme weakness, bleeding from your mouth, nose or rectum, blackining & death of tissues in your extremities.

7. SPANISH FLU (1918 to 1920)-

Virus: Influenza A/H1N1

Worldwide spread. The disease did not bacterial originate in Spain; said to have originated in France.

Picture credits: Goog

Symptoms - Fever, headache, sore throat, During the second wave, complicated bacterial pneumonia, skin turning blue and their lungs filling with fluid that caused them to suffocate.

8. ASIAN FLU/INFLUE NZA PANDEMIC

(1957 to 1958)-Virus: Influenza A/H2N2 Worldwide spread.Vaccine was introduced in 1957. The disease emerged from East Asia. Symptoms - Fever, body aches, chills, coughs, weakness & loss of appetite.

9. HONG KONG FLU (1968 to 1970)-

Virus: Influenza A/H3N2 Worldwide spread. Symptoms - Symptoms of typical influenza including chills, fever, muscle pain & weakness.

10. HIV/AIDS (1981 to present)-

Worldwide spread. HIV causes AIDS and interferes with the body's ability to fight infections. The virus can be transmitted through contact with infected blood, semen or vaginal fluids.

Symptoms - Fever, sore throat, fatigue, weight loss, night sweats, re-current infections.

11. SARS (2002 to 2004)-

Severe acute respiratory syndrome. SARS is a virus transmitted through droplets that enter the air when someone with the disease coughs, sneezes or talks. Symptoms - Fever, persistent dry coughs, headaches, muscle pains, dif-ficulty in breathing.

12. MERS (2012 to present)-

Middle East respiratory syndrome

Virus: MERS coronavirus. First outbreak in Saudi Arabia. Symptoms - Fever, cough, shortness of breath. Other symptoms like nausea, vomiting & diarrhoea.

13. COVID-19 (2019 to present)-

Virus- COVID-19

Worldwide spread. The virus that causes COVID-19 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales.

Everyone 18 and older is eligible to get the vaccine against it.

Symptoms - Most common symptoms include fever, dry cough, tired-ness. Less common symptoms include aches and pains, sore throat, diarrhoea, conjunctivitis, headache, loss of taste or smell, a rash on skin, or discoloura-tion of fingers or toes.

Now we know how the world has suffered so many uncertainties and yet humanity has still survived.



(1)

Achievement

KAMP-NASTA- online competition:

A report by Dr. Alpana Dey

311 students from classes 5 to 10 and 11, 12 Science from The AVS appeared in online KAMP (Knowledge and Awareness Mapping Platform) -NASTA (National Assessment for Scientific Temperament and Aptitude). The students from the Assam Valley School participated in this exam for the first time and one of our students is a state winner and six are District toppers. There were 56,000+ students from 2500+ schools, across India. Following are the details-

- 1. Host organisation- KAMP is an Initiative of CSIR and National Institute of Science Technology and Development Studies (NISTADS),
- 2. Month & Year of exam 27th January to 4th Feb 2021
- 3. Achievement- 1. Vasuman Lohia (class 11) State topper
 - 2. Ronit Dutta Roy (class 5) District topper
 - 3. Sivdatta Thanjam (class 6) District topper
 - 4. Krishna Agarwal (class- 8) District topper
 - 5. Aditya Panigrahi (class- 9) District topper
 - 6. Utkarsh Agarwal (class- 11)- District topper
 - 7. Ethanael Kharkongor (class-12)- District topper

** CSIR-NISTADS is one of the premier Institution and a constituent laboratory of CSIR, Ministry of Science and Technology, Government of India to provide inputs to policymakers for formulating the policy of Science, Technology, Innovation (STI) and entrepreneurship. Knowledge and Awareness Mapping Platform (KAMP) is also inspired by Prime Minister Narendra Modi's vision of a new India and Scientific Social Responsibility (SSR) of Scientific Community and Institutions.



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