

# SPECTRUM

THE ASSAM VALLEY SCIENCE JOURNAL



## SCIENCE DAY EDITION



# Editor's Note

The word science comes from the Latin “scientia,” meaning knowledge. We Human beings possess the innate thirst to acquire knowledge and understanding of the world, which is as perennial as the streams. Our curiosity and eagerness have driven us to unravel the various mysteries and make many new discoveries that go beyond human cognition. To commemorate these activities, efforts and achievements in the field of science for welfare of human being, National science day is celebrated as one of the main science festivals in India every year. The students of AVS have followed the legacy of valuing science not only as a subject but as a life style. The science day was celebrated in AVS following these beliefs with complete enthusiasm, to widely spread a message about the significance of scientific applications in the daily life of the people, AVS Spectrum presents to you a compilation of all the exhibitions.

*Magdolina R. S. Lepcha*

## WHAT'S INSIDE

*National Science Day  
Comic Strip Winners  
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Are we going Extinct?  
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# SCIENCE DAY THEME 2021:

*“Future of STI (Science, Technology and Innovation): Impacts on Education, Skills, and Work”.*

*The National Science Day 2021 aims to motivate the students to gain hands-on experience in the field of science.*

# National Science Day at AVS





# Report by

Kaustav B. Arya

Sat, 27 Feb: Keeping on track with the previous years, this year was no exception as The Assam Valley School celebrated National Science Day with full of joy and enthusiasm. It motivated everyone to have trust in science. The celebration helped the small kids to develop passion for the subject and realize the essence of Raman Effect. Noticing the actual day of 28 February which was Sunday(holiday), the school organised the event on 27 February. The students and the teachers engaged in this programme with sheer involvement. The schedule was hectic but satisfying. Though it was a whole school event, the programme emphasised on lower school students and five interesting science games were arranged for learning with fun. Special music arrangements as fillers were also the highlight of the programme so that the lower school students don't feel monotony. For increasing their interest, chocolates were distributed to the winning kids of each and every game. Some interesting posters were designed by students on specific scientific topics. Comic Strip contest on 'scientists and discoveries' was also held. All strips reflected brilliant creativity of the students. Article writing competition was another bonus for students to develop thinking skills. The basketball ground turned out to be a science hub on that day. The stunning number of participants enthralled the organisers. The 5 game corners were:

1. Quiz Corner
2. Brain Gym
3. Rocket Corner
4. Environment Corner
5. Rapid Fire

# Quiz Corner

This had students from lower schools answering questions while running a path. The ones who ran the path quickly and answered questions correctly won a prize.

The winners are:

From Class 5:

1. Dweepanneta
2. Pradanya Kashyap
3. Niharika
4. Adya Rakshit
5. Suvechha
6. Benjamin
7. Ronit Datta Roy

From Class 7:

1. Prapty Borah

From Class 8:

1. Aayat Hazarika
2. Tonoy Saikia
3. Violeena Baruah
4. Shivangi Puja Baruah
5. Bhuvi Tibrewalla
6. Yashvi Modi

From Class 10:

1. Ankita Sarkar

From Class 11:

1. Samrat Gupta
2. Raahil Hazarika



# Brain Gym

The students had to answer three questions, one each from physics, chemistry and biology. Prizes were given for any two correct answers.

The winners are:

From Class 6:

1. Archit
2. Kaliyan

From Class 7:

1. Neev Kejriwal
2. Ahona
3. Anya
4. Vini
5. Priyam
6. Tapash

From Class 8:

1. Devija
2. Pratiti
3. Tasmin
4. Bhuvi
5. Anushka Singh
6. Donin
7. Praveka
8. Aayat
9. Yashvi

From Class 11:

1. Samrat
2. Vasumann
3. Saumya
4. Aarav



# Rocket Corner

This corner propelled students to build rockets and launchers with pipe and paper. This was a pure fun stall. Whoever could cross the deciding mark shooting the launcher, he/she became the winner.

The winners are:

From Class 5:

1. Ashlee Mutum
2. Adrika Dey
3. Amania Agitok Sanga
4. Ankussh Bezbaruah

From Class 6:

1. Nazya Noorine
2. Myinthy Manchey
3. Anushree Singh

From Class 7:

1. Hitesh Ruthia
2. Neev Kejriwal
3. Priyam Bagaria

From Class 8:

1. Akshat Poddar, Hardik Poddar  
Sparsh Agarwal (Class 11)

From Class 11:

1. Swaptadeep Paul





# Environment Corner

This was a puzzle contest. Students were asked to solve puzzles of rhino, kingfisher etc. The zeal of the students to participants amazed all. This was a group event with two members per group.

The winners of this contest are:

Round 1 –

1st – Ronit, Niraka (From Class 5)

2nd – Swati, Manyanki (From Class 5)

Round 2 –

1st – Purwashi, Sughebbhi (From Class 8)

2nd – Darajha, Aatreyee Neog (From Class 7)

Round 3 –

1st – Saliyo, Denywa (From Class 6)

2nd – Bubly, Urayp (From Class 7)

Round 4 –

1st - Ahona, Prapti Borah (From Class 7)

Round 5 –

1st - Luqmaan, Kaustav B (From Class 11)





# Rapid Fire

This was a quiz contest. There were buzzers. Once the question was asked to a group of participants, they had to click the button as fast as possible to be able to answer. Whoever clicked the button first, he/she had to answer. If that was correct, then the student was declared to be winner.

Here is the list of winners of this game:

From Class 7 –

1. Purvi Kejriwal
2. Urvee Rathi
3. Prapty Borah
4. Prisha
5. Zaheen
6. Dhona Choudhury

From Class 8 –

1. Divija Divyajyoti
2. Bhuvi Tibrewalla
3. Shivangi Puja Barooah
4. Tasmin Ahmed
5. Pratiti Baruah
6. Yashvi Modi
7. Aarushi Mittal

From Class 9 –

1. Khyati Borah
2. Siddhi Gupta

From Class 10 –

1. Harshvardhan



# Comic Strip Winners

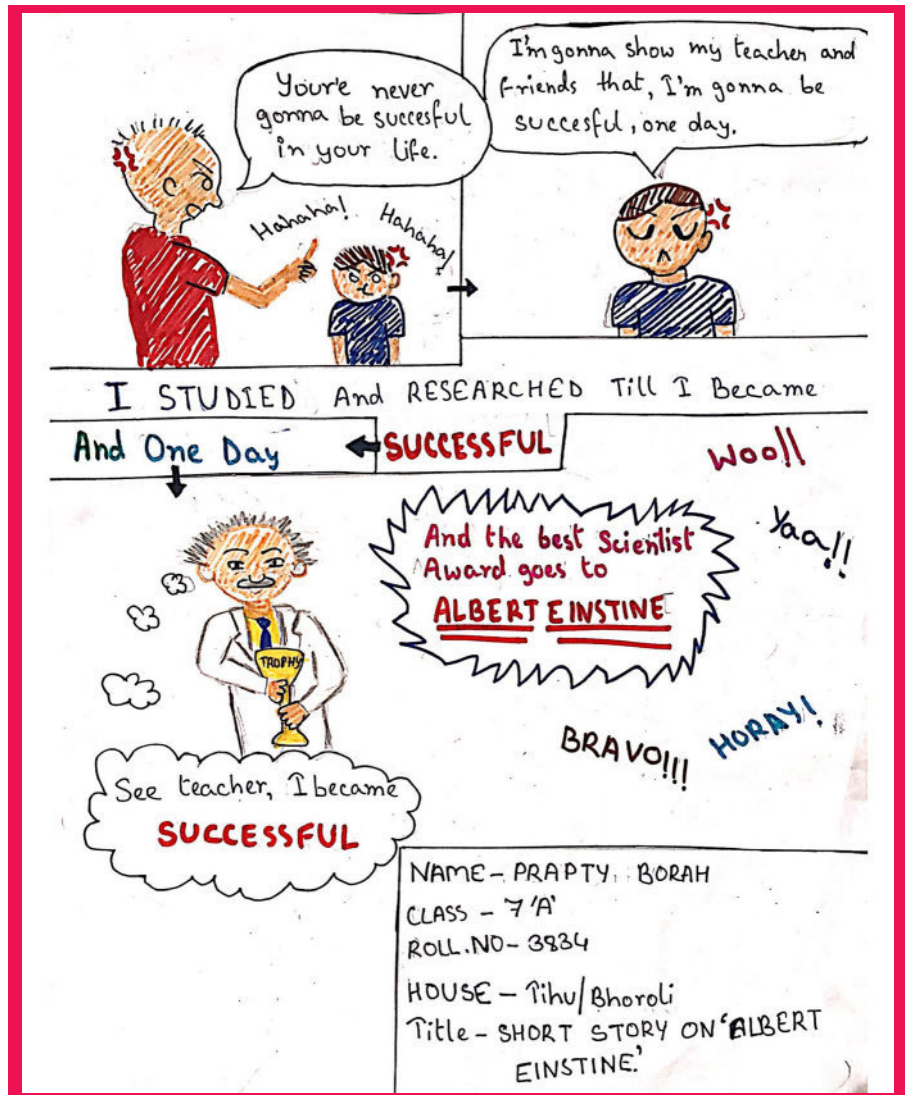
**1st Position:**  
Divija Dibyajyoti





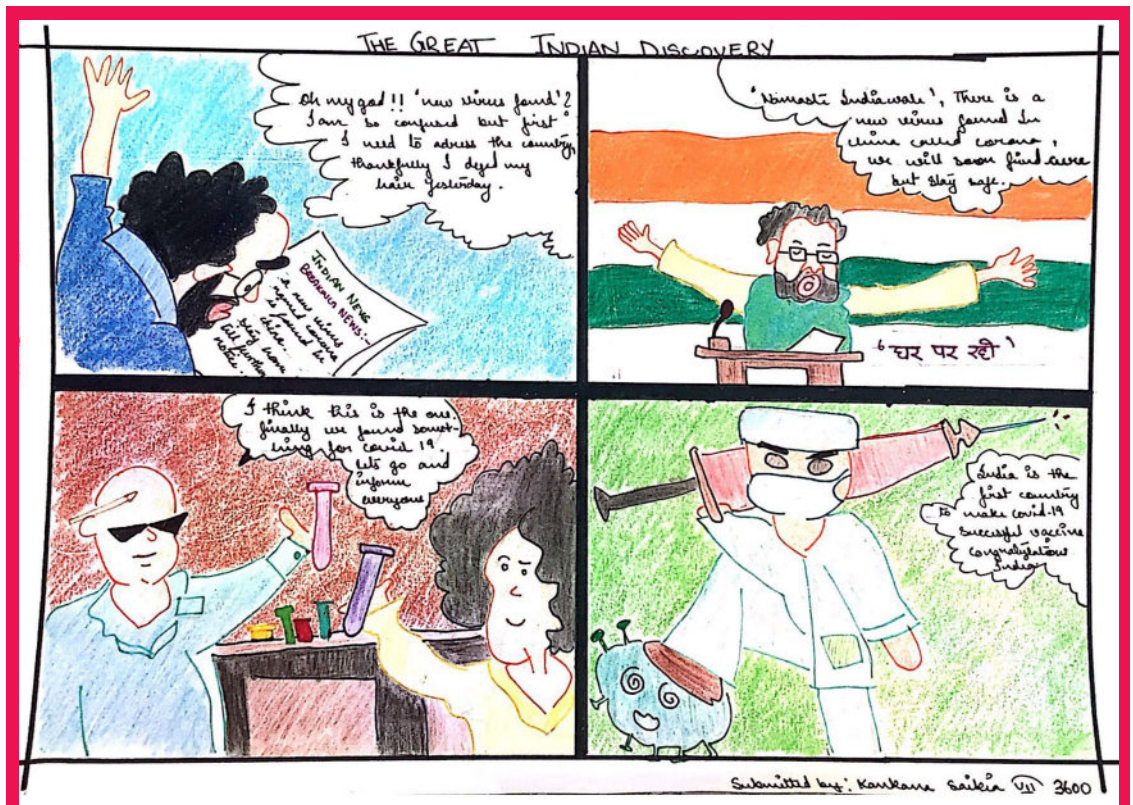
## 2nd Position:

Prapti Borah



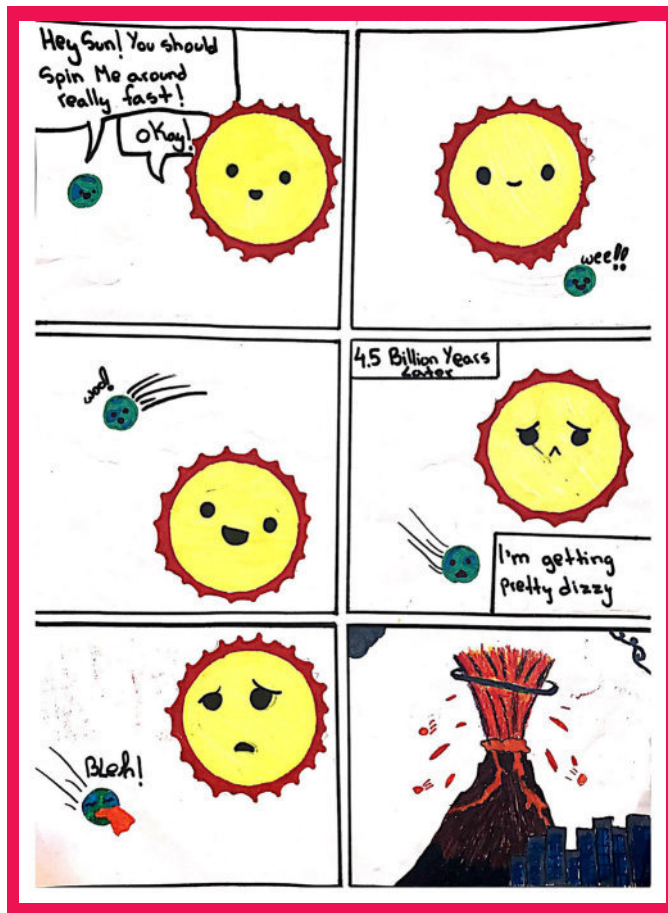
## 3rd Position:

Kankana Saikia





**Other Entries:**  
Monsum and Nazifa



**Other Entries:**  
Visizonvo, Sulimi and Vini



# Science Fiction

## 1st Position:

Zaheen Shah

## Ray of Hope

“ We are really sorry to inform you but your daughter has Hepatitis-B. We understand if you feel angry or frustrated. It’s more than okay to feel like that. But, you should be thankful that we detected it in this stage.” I know my parents zoned out after that, because I did too. What? Hepah- what? What is that? How bad is it? Will I die? “Detected in this stage?” How many stages are there? I should’ve said good bye to my dogs. Is there a cure? Millions of questions overloaded my mind as I watched the doctor calm down my mother who was clearly having a break down.

People in my family or the ones we knew started calling my parents as the new got spread in my family. Every time they gave the news to someone, I could see the worry in their faces. I started researching on Hepatitis because I wanted to know what was happening inside my body. Soon enough, I found lots and lots of articles explaining what it is, what the symptoms were but surprisingly there was no cure mentioned anywhere in those articles.

So, I’m going to die? I’m really sure what to do with that. Every day, I find myself feeling guilty for putting this burden on my parents even though I know it is not my fault. Every day I pray to god to do something that would

make me feel less guilty.

About 10 days later, my doctor called us suddenly for consulting my case again and then he said, “You are going to be okay.” After hearing him say that I will be okay, I got a little confused. As he left the room, I could hear the other doctors cheering. I could hear they say, “They did it. India did it. They found the cure for Hepatitis.”



## 2nd Position:

Toweine

# To Mars – based on a movie

Many people have many stories or myths about their success but my story started as a normal housewife, in a normal kitchen. One fine morning I was making puri for my family then I remembered an old trick which my mother taught me when we were making puris together. Some people have the gas on till the puri is cooked but for this trick we have the gas on till the oil is hot enough to cook the puri.

Here I am today, using the same concept in ISRO. It was a late evening, me and my colleagues were tired after a long and busy day. We received a mail telling us that in a project that both NASA and ISRO worked on together, NASA was paid more together. The next day we started a new project but we started a new project but we didn't have enough money for the equipment and machines. After we made the drafts, we decided to make a satellite for Mars, "Mission Mangal". That was the initial thought. It took us years and years to complete it. My colleagues and I put in a lot of effort to make it. Finally, we were done! There were tears and laughter and celebrations. We were launching a satellite. It was a bit tough because we had never done such a project before.

The people who were helping us were assistant professors so they had no idea on how to launch it. But a kind and intelligent person from NASA helped us. After the launch, we celebrated. A week later we came to know that our satellite did not have enough fuel, we were worried sick. Some people lost hope and practically gave up after hearing this. 'The old puri trick' said a voice in my head. I told everyone that we

will spin the satellite and turn off the engine and then the satellite will spin itself. We did all we could and then someone bursts into the room shouting "it worked". For a second everyone was silent then the room was filled with rejoice. For days after, we celebrated and were rewarded and congratulated, this is how my success story ends.





# FOOD FOR THOUGHT??

## ARE WE GOING EXTINCT? ALMOST CERTAINLY

Mrs. Shalu Sharma

Are we going extinct? The answer is yes. Eventually, everything goes extinct. Almost all species that ever lived, over 99.9 per cent, are extinct.

Some left descendants and some didn't. According to Nick Longrich's article in 'The Conversation', who is a senior lecturer in evolutionary biology and palaeontology at the University of Bath, this is true in case of human species as well. Neanderthals, Denisovans, Homo erectus all vanished, leaving just Homo sapiens. Humans are inevitably heading towards extinction. The question isn't whether we go extinct, but when.

Humans have vulnerabilities. Large, warm-blooded animals like us can't handle ecological disruptions well. That leaves us vulnerable to even brief food chain disruptions caused by catastrophes such as volcanoes, global warming, ice ages or the impact winter after an asteroid collision.

We also live longer, with long generations and

few offspring. Slow reproduction makes it hard to recover from population crashes, while slow natural selection makes it difficult to adapt to rapid environmental changes.

Thus, we're vulnerable, but there are reasons to think humans are resistant to extinction, maybe uniquely so. We're a deeply strange species – widespread, abundant, supremely adaptable – which all suggest we'll stick around for a while.

First, we're everywhere. Geographically widespread organisms fare better during catastrophes such as an asteroid impact, and – mass extinction events. Large geographic range means a species doesn't put all its eggs in one basket. If one habitat is destroyed, it can survive in another.

But most importantly, we adapt unlike any other species, through learned behaviour culture – not DNA. We're animals, we're mammals, but we're such weird, special mammals. We're different.

We're so uniquely adaptable, we might even survive a mass extinction event. Long term disruptions, like ice ages, might cause widespread conflicts and population crashes, but civilizations could probably survive.

But this adaptability sometimes makes us our own worst enemies – we're too clever for our own good. Changing the world sometimes means changing it for the worse, creating new dangers: nuclear weapons, pollution, overpopulation, climate change, pandemics. However, we've mitigated these risks with nuclear treaties, pollution controls, family planning, cheap solar power, vaccines. We've escaped every trap we set for ourselves so far. Our global civilization also invented ways to support each other. People in one part of the world can provide food, money, education,

and vaccines to vulnerable people elsewhere. But interconnectivity and interdependence also create vulnerabilities like recently a virus from a cave in China spreads to threaten the lives and livelihoods of billions.

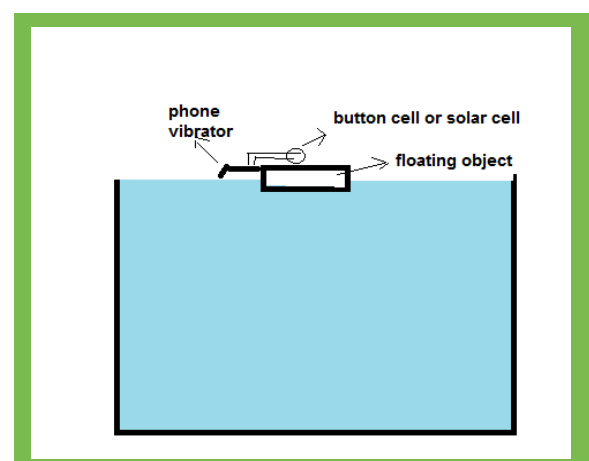
Pessimistic scenarios might see natural or manmade disasters leading to widespread breakdown of social order, even civilisations, and the loss of most of the human population – a grim, post-apocalyptic world. Even so, humans would likely survive, perhaps reverting to subsistence farming, even becoming hunter-gatherers.

Survival sets a pretty low bar. The question isn't so much whether humans survive the next three or three hundred thousand year but, whether we can do more than just survive.

## Marching with the theme - Some Innovation

### A MOSQUITO REPELENT TO PREVENT BREEDING OF MOSQUITOES IN STAGNANT WATER.

Kriya Modi  
Soudane Sha



Standing water is the number one breeding spot for mosquitoes. Mosquitoes breed by laying eggs in stagnant water. Mosquitoes can cause itchy bites and cause more problems like transmitting dangerous illnesses and viruses. The best way to manage this mosquito problem is to keep the mosquitoes from breeding. We have developed a small device that runs on a button cell and will keep vibrating hence keeping stagnant water in motion, not allowing mosquitoes to breed.





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