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LASER

Latest **A**dvancements in the field of **S**cience and **E**nvironment **R**elated topics

Contents

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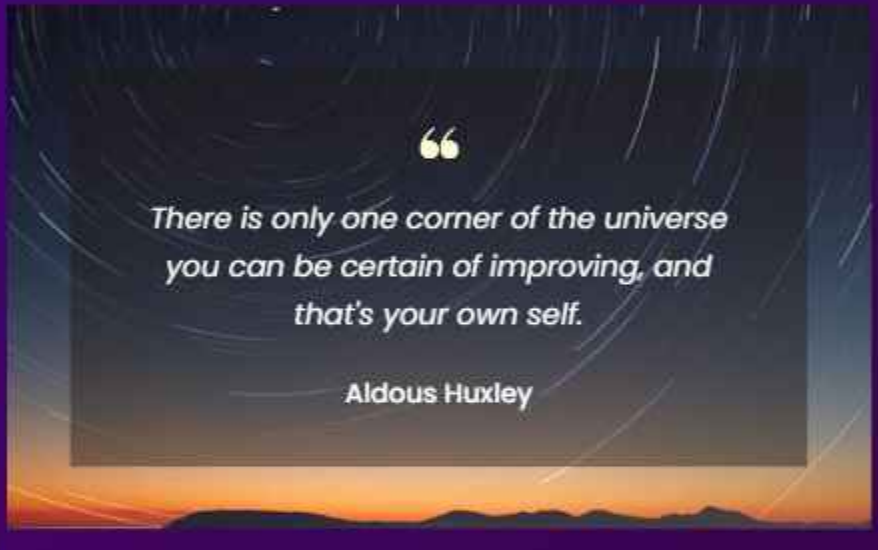
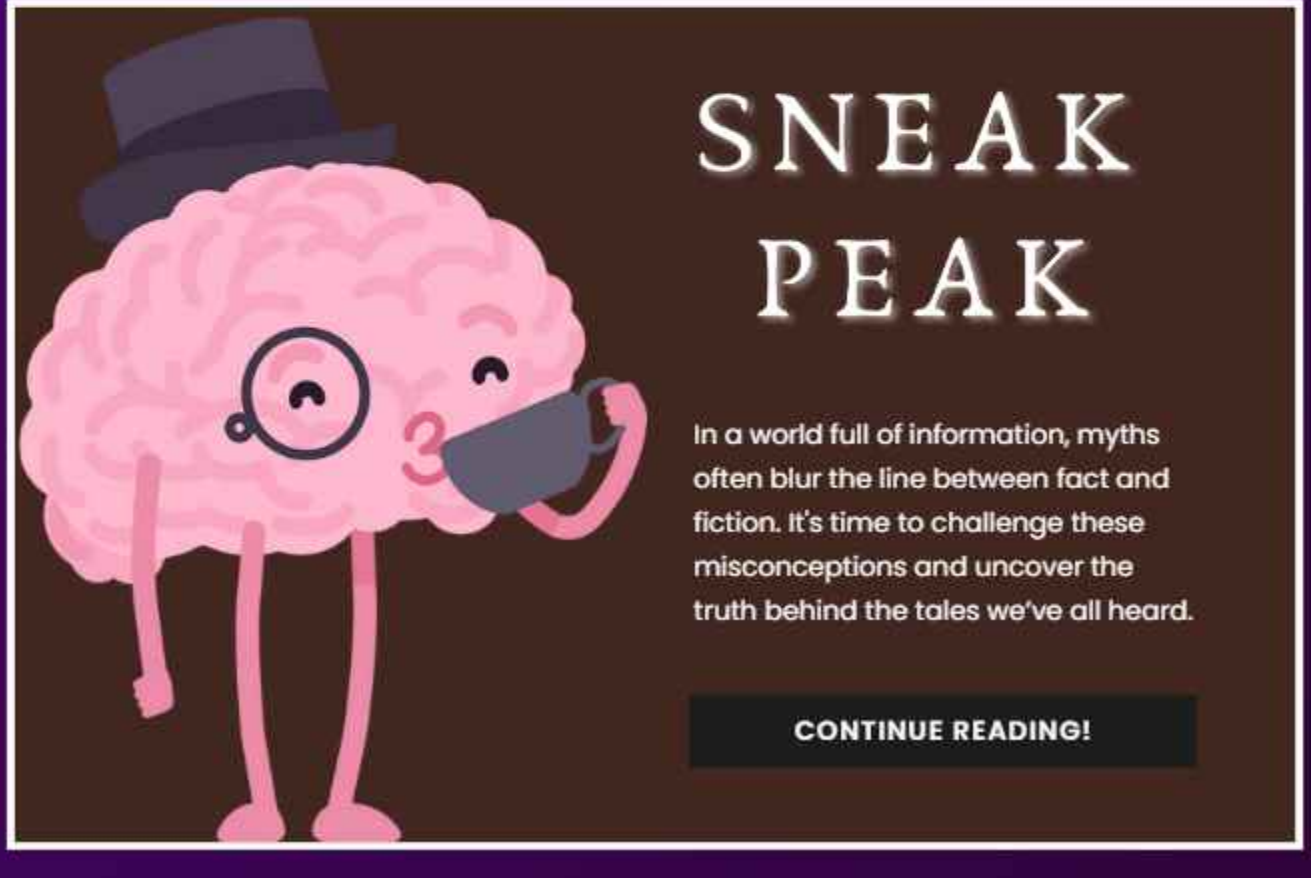
FROM PLANETARY SOIL TO CELESTIAL ALCHEMY





MEET THE TEAM:

LASER

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Embark on an Epic Cosmic Journey with Our Latest LASER Newsletter! 🚀✨

Step into the vastness of the universe as we explore the marvels of space in "Cosmic Navigators: Exploring the Depths of Space." 🌌✨ Dive into the latest discoveries, from groundbreaking advancements in space exploration to the inspiring stories of astronauts like Sunita Williams. 🌠🌍

Join us in celebrating the boundless possibilities of science as it unveils the mysteries of the cosmos. It's time to reach for the stars—let's navigate the universe and make our mark among the galaxies! Stay stellar, LASER Crew! 🌟🚀


PRIME TIME:
Out of This World

REDEFINING SPACE RETURN

By: Ruhaan Jagota, 11C

The Ingenious Journey of SpaceX's Crew Dragon

The Crew Dragon spacecraft from SpaceX has completely changed how astronauts return to Earth and established new standards for technological innovation, safety, and efficiency in human spaceflight. The flawless and safe voyage to and from the International Space Station (ISS) has been guaranteed by SpaceX, NASA's first commercial partner for crewed flights.

Crew Dragon's return trip to Earth is a feat of engineering, displaying creativity and accuracy. Under the supervision of SpaceX mission control and the astronauts on board, the spacecraft undocks from the ISS to begin its fall. Then, in order to decrease its velocity and re-enter Earth's atmosphere, it performs a deorbit burn. The spacecraft's sophisticated heat shield protects its valuable human cargo on re-entry by withstanding the extreme heat produced by atmospheric friction.

Since it guarantees a safe landing, the parachute system is a highlight of the descent. After stabilizing the spacecraft using drogue parachutes, the Crew Dragon is gently guided to a splashdown in a recovery zone that has been pre-designated, either in the Gulf of Mexico or the Atlantic Ocean, by the main parachutes. Recovery crews from SpaceX are available right away to secure the ship and safely remove the astronauts.

The Crew Dragon has successfully performed multiple flights, including Crew-1, Crew-2, and Crew-3, since its first crewed return in August 2020 during the historic Demo-2 mission. All of these missions brought astronauts back safely from prolonged stays at the ISS. SpaceX has proven its capacity to lower costs without sacrificing safety thanks to the system's dependability and reusable architecture.

The Crew Dragon program, which combines creativity and pragmatism, is evidence of the developments in commercial spaceflight. Its triumph not only ushers in a new era of space exploration, but it also advances humanity's goal of enabling more people to travel to space.

June 6, 2024

Mission Launch

NASA's Sunita Williams and Butch Wilmore launch on Boeing's Starliner for its first crewed flight to the ISS.

September, 2024

Starliner Issues

Starliner faces thruster and helium issues; decided to return to Earth uncrewed for safety.

September 7, 2024

Uncrewed Return

Starliner returns uncrewed, leaving Williams and Wilmore on the ISS.

December, 2024

Return Plan Update

NASA plans to return Williams and Wilmore via SpaceX Crew Dragon in March 2025.

Planned:

Late March 2025

Crew-10 Launch

Crew-10 launch scheduled to bring Williams and Wilmore back from the ISS.

Expected

April 2025

Astronauts' Return

Williams and Wilmore expected to return to Earth aboard SpaceX Crew Dragon!

REVOLUTIONISING SPACE EXPLORATION: PSLV-C60

India's Next Step...

By: Ghhanali Singh, 9B

Space- docking, as of November 2024, had been achieved by only three countries namely, the US, Russia and China. Space docking is defined as the joining of two fast moving satellites in space, usually small ones. For example, five spaceships can be docked in the ISS (International Space Station). This includes the one that took Sunita Williams and Barry Wilmore (SpaceX Dragon Freedom). ISRO aimed to make India the 4th country to achieve this important action. PSLV-C60 is a Polar Satellite Launch Vehicle (PSLV) that carried the SpaDeX spacecraft into orbit. The mission was launched by the Indian Space Research Organisation (ISRO) from Sriharikota, Andhra Pradesh on December 30, 2024.

2 spacecrafts, each of 220kg each were launched using the PSLV C-60 rocket. Both spacecrafts were launched simultaneously, but separately into 470 km orbit at a 55-degree inclination. The rocket was used to give relative velocity to one of the satellites which would act as the target, the other one being the chaser. The target spacecraft would be allowed to move 10-20 km away from the chaser. To further increase the distance, the target used its propulsion system and slowed down suddenly. After this maneuver, the target and chaser would be in the same orbit, and they'd have the same velocity and a distance of 20km between them. This exercise is known as 'Far Rendezvous', which created relative velocity and compensated for a small portion of it. This technique was alsso used for the docking.

Step by step, the chaser approached the target, and docked at a speed of 10mm/s, which is known as 'low impact docking system'. After docking, there would be an electric current transfer between the two. However, ISRO hasn't designed these spacecrafts just for docking. The undocked and were used to complete their respective SpadeX missions.

The spacecraft were SDX01 (the Chaser) and SDX02 (the Target).

The mission is important for India's future space ambitions, including the planned Indian space station, and the manned "Gaganyaan" mission. The mission made India the fourth country in the world to achieve in-space docking.

Cosmic Navigators: Exploring the Depths of Space

Chandrayaan 3

INDIA'S COSMIC OVERACHIEVER!

By: Shreya Batra, 9B

People say, 'The sky's the limit,' but I guess ISRO has always been the overachiever in its class.
What does it take to land where no one has ever dared? Ask ISRO
"I guess third times a charm" is actually real? Let's get into it.

Chandrayaan-3 is the third mission in the Chandrayaan programme, a series of lunar-exploration missions developed by the Indian Space Research Organisation (ISRO).The spacecraft entered lunar orbit on 5 August, and India Became the first country to touch down near the lunar south pole, at 69°S, the southernmost lunar landing on 23 August 2023 at 18:04 IST.ISRO became the first agency to land near the south pole of the moon in its first attempt and overall the fourth space agency to successfully land on the Moon, after USSR, NASA and the CNSA. The lander was not built to withstand the cold temperatures of the lunar night, and sunset over the landing site ended the surface mission twelve days after landing.The propulsion module, still operational, transited back to a high Earth orbit from lunar orbit on 22 November 2023 for continued scientific observations of Earth. It operated until 22nd August.
ISRO's mission objectives for the Chandrayaan-3 mission are:

1. Engineering and implementing a lander to land safely and softly on the surface of the Moon.
2. Observing and demonstrating the rover's driving capabilities on the Moon.
3. Conducting and observing experiments on the materials available on the lunar surface to better understand the composition of the Moon.

The lunar south pole region holds particular interest for scientific exploration. Studies show large amounts of ice there. The ice could contain solid-state compounds that would normally melt under warmer conditions elsewhere on the Moon—compounds which could provide insight into lunar, Earth, and Solar System history. Mountains and craters create unpredictable lighting that protect the ice from melting, but they also make landing there a challenging undertaking for scientific probes. For future crewed missions and outposts, the ice could also be a source of oxygen, of drinking water as well as of fuel due to its hydrogen content.
Chandrayaan-1, launched in 2008, was India's first lunar mission and a trailblazer for ISRO. It discovered water molecules on the Moon, a groundbreaking finding in space exploration. The orbiter carried 11 scientific instruments and successfully mapped the Moon's surface before its mission ended in 2009. It firmly established India as a key player in space science.
A lander was scheduled to touch down on the lunar surface on 6 September 2019 to deploy the Pragyan rover. The lander lost contact with mission control, deviated from its intended trajectory while attempting to land near the lunar south pole, and crashed. This lander was "Chandrayaan 2".
Chandrayaan-3 isn't just a mission; it's a reminder that with determination and innovation, India can reach for the stars—and land on the Moon.

India's Proud Lunar Triumph

By: Nityashi Pandey, 6B

Did you see Chandraayan 3,
It went above the land and sea.
We Indians are around of it,
as we never thought to quit.
It's India's ambitious future vision,
The much-hyped moon mission .

Now let's be a part of ISRO's
happiness,
for our Victory.

SUNITA WILLIAMS

A Trailblazer Among the Stars

By: Ruhaan Jagota, 11C

Sunita Williams, an astronaut, engineer, and United States Navy officer, is a name synonymous with inspiration and determination. Born on September 19, 1965, in Euclid, Ohio, to Indian-American and Slovenian-American parents, she became one of the most prominent figures in the field of space exploration. Her remarkable achievements have broken barriers and inspired countless people worldwide, especially women aspiring to excel in STEM fields.

It wasn't an easy path for Sunita Williams to space. She received a bachelor's degree in physical science from the United States Naval Academy in 1987 and a master's degree in engineering management. She started her Navy career as an aviator and test pilot and logged more than 3,000 flight hours in more than 30 different aircraft. But her aspirations extended beyond the atmosphere of Earth, which brought her to NASA in 1998, when she was chosen as an astronaut.

Sunita Williams is among the most experienced astronauts, as she had successfully completed two space missions and spent a total of 322 days in space. Veteran of the longest spaceflight by a woman and most spacewalks (7) by a woman – over 50 hours! Her contributions on the International Space Station (ISS) were both monumental and were used in support of scientific research, space station maintenance, and operations. In fact, she even ran the Boston Marathon on a treadmill on the ISS, showing her dedication both to fitness and to innovation.

But Sunita Williams is more than even an astronaut; Sunita Williams is a symbol of courage, of hard work, of dedication. Her achievements in space exploration and her capacity to inspire people earn her the title of role model for millions of people around the world. The sky is not the limit for her — it is only the beginning, as her accomplishments have demonstrated.

Early Life and Education

1965 (Sept. 19): Born in Euclid, Ohio, U.S.

1983: Entered the U.S. Naval Academy.

1987: Commissioned as an ensign and began aviator training.

Military Career

1989: Began combat helicopter training.

1992: Participated in Hurricane Andrew relief efforts.

1993: Became a naval test pilot.

1995: Earned a Master's degree in engineering management from the Florida Institute of Technology.

NASA Career

1998: Selected for NASA's astronaut program.

2006 (Dec. 9): First spaceflight aboard STS-116 Discovery, breaking records for:

1. Longest female space mission (195 days).
2. Spacewalk hours (29+)

2007 (June 22): Returned to Earth.

2012 (July 15): Second spaceflight aboard Soyuz TMA-05M, becoming commander of Expedition 33

2012 (Nov. 11): Returned after nearly 127 days in space

Recent Missions

2015: Selected for NASA's Commercial Crew program

2024 (June 5): Pilot of Boeing's CST-100 Starliner test flight to the ISS, overcoming propulsion system challenges

2025 (Feb.): Scheduled to return to Earth with SpaceX Crew Dragon

THE BLACK HOLE

By: Pranav Gupta, 11C

Where the Universe keeps Its Biggest Secrets...

Black holes are among the most mysterious cosmic objects, much studied but not fully understood. These objects aren't really holes. They're huge concentrations of matter packed into very tiny spaces. A black hole is so dense that gravity just beneath its surface, the event horizon, is strong enough that nothing – not even light – can escape. The event horizon isn't a surface like Earth's or even the Sun's. It's a boundary that contains all the matter that makes up the black hole. The boundary surrounding a black hole is called the event horizon. Once something crosses this boundary, it is lost forever to the black hole's gravitational grip. Beyond this, the laws of physics as we understand them cease to apply, making black holes one of the most mysterious phenomena in the cosmos. Theories of wormholes, the information paradox, and Hawking radiation add layers to their intrigue, making them not just cosmic anomalies but keys to unlocking the deepest secrets of existence. The singularity at the centre of a black hole is a place where the known laws of physics break down. Scientists are uncertain about what happens in

this region, as it combines the effects of quantum mechanics and general relativity—two theories that are not yet fully reconciled. When matter falls into a black hole, what happens to the information it carries? According to quantum mechanics, information cannot be destroyed, but black holes seem to erase it entirely. This paradox has puzzled physicists for decades. Some theories suggest that black holes could be gateways to other parts of the universe or even to different dimensions.

These ideas, while speculative, fuel our imagination about the potential of space exploration and the nature of reality. Black holes remain one of the most mysterious and awe-inspiring phenomena in the universe. They challenge our understanding of space, time, and the fundamental laws of nature.

THE COSMIC TRAP WITH NO ESCAPE!

1. Neptune has completed only one orbit around the sun since its discovery.

2. The moon is going about 3.8 cm farther from us every year.

3. The coldest planet in the solar system isn't Neptune- it's Uranus

4. There are 1.3 million Earths that can be packed tightly into the sun and 5 billion suns could fit in UY Scuti, one of the largest known stars.

5. Black Holes have theoretical opposites called 'White Holes'

6. Gamma-ray bursts release more energy in 10 seconds than our sun in its entire life.

7. 1 tsp of a neutron star would weigh as much as the human population.

Revolutionary Innovations in Space Exploration

Space exploration has always fascinated humanity, constantly expanding the boundaries of technology, science, and imagination. The last few decades have seen great advancements that redefined our comprehension of the universe, turning space exploration into a more efficient, sustainable, and accessible practice. These developments have not only explored new frontiers but have also laid the foundation for future possibilities in interplanetary travel, resource utilization, and the study of life beyond our planet.

One of the most powerful innovations is reusable rocket technology pioneered by private companies such as SpaceX. Until recently, rockets used to launch space missions were thrown away after one flight, making exploration extremely costly. But the development of reusable rockets, such as SpaceX's Falcon 9, has sharply cut the cost of putting payloads into orbit. Recent advances in technology like artificial intelligence are not only driving down the cost of space missions but also speeding up interplanetary science such as the Mars missions.

The James Webb Space Telescope, which represents a giant leap in harboring distant galaxies and decoding the origins of the universe, is yet another seminal invention. Unlike its forerunner, the Hubble Space Telescope, the James Webb works in infrared wavelengths, allowing it to peer through cosmic dust and reveal concealed celestial wonders. It gives scientists an unprecedented window into the birth of stars and galaxies — and even the atmospheres of both classes of planets that lie outside Earth — helping provide one answer as to whether life exists beyond our own planet.

In addition, the advancements in artificial intelligence (AI) and robotics also significantly contribute to space exploration. One of the most well-known of these is the robotics structure present in the Perseverance rover that can be found on the surface of Mars; this AI-mighty rover is able to search planet-destructive terrains, pick up samples, and even search for types of microbial life on the planet billions of years ago. These technologies mitigate risks for astronauts and increase the range of missions to areas of space that had previously been out of reach.

With many revolutions in mankind, the idea of colonies on the Moon or Mars no longer seems a far-fetched dream. It is not only a matter of scientific curiosity, but one of securing the future of humanity, of solving global challenges, of inspiring generations to aspire to the stars through the moon and beyond.

By: Ruhaan Jagota, 11C

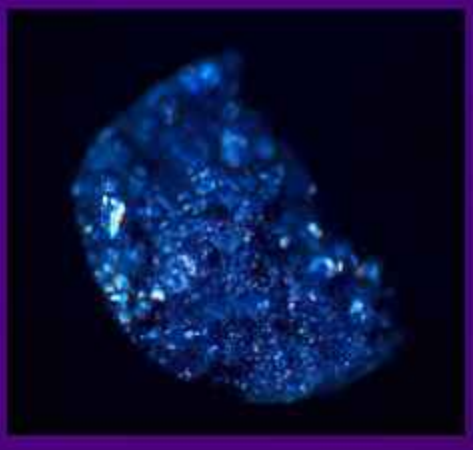
THE SIXTH OCEAN

By: Ghhanali Singh, 9B

How many major oceans do we have on Earth? Evidently, five. Namely, the Atlantic, The Pacific, The Indian, The Arctic and the Southern Ocean. But did you know, scientists have recently discovered a sixth ocean. No, it's not an invisible one which has just decided to show up in the middle of nowhere on the surface. It's not in the sky and it's not visible to the average science geek or anyone living anywhere. However, it still holds three times the amount of ocean water on the surface.

So, where is this humongous store of water, why can't we see it on the surface and who exactly told us about it? Well, we can't see it on the surface because it's not on it- it's 700 km below the Earth's crust, in the mantle. It's hard to believe, though. I mean, just how can water be present in the mantle? And where has so much water even come from? I'll try my best to explain.

Recently, scientists at the Northwestern University, USA, discovered a massive water reservoir, 700kms beneath the Earth's surface. They stationed about 2,000 seismographs across the US, instruments capable of penetrating deep within the surface and revealing to us more about its internal structure. Using this tool, they analyzed tremors from over 500 earthquakes, noticing the decrease in velocity in the waves in a particular region in the mantle. This led them to believe that there was a substance acting like a sponge, indicating the presence of water.



Ringwoodite

This pool of water is trapped inside a blue rock formation known as ringwoodite, a mineral that forms in the mantle under high heat and pressure. It is a high-pressure polymorph of olivine, a magnesium iron silicate. It has a crystalline structure which allows it to hold water, much like a sponge.

More importantly, the discovery backs up the theory that a lot of water on Earth seeped up from the Earth's interior rather than coming from external sources like comets, highlighting the importance of the mantle in the water cycle. The mantle acts like a vast storage system, cycling water from the surface and back through geological processes like volcanic activity.

An important thing to note however, is that the ocean is not in its traditional sense, rather it's a structure of water molecules trapped in ringwoodite, which increases the storage capacity of water in compact space. This source of water is essential for maintaining the stability of the oceans on the Earth. Had this water been present on the surface of Earth, the only visible land would be mountains.

For further research, the team plans to gather seismic data from around the world. The data can give us insights on the complexity of the water cycle on the planet, which appears to be much more than we had thought earlier. This discovery also suggests that Earth's interior water reserves might have a big role in directing geological activities like earthquakes and water reserves. Understanding this hidden reserve may help in knowing more about the effects it has on the movements of tectonic plates, adding another layer of knowledge about the inner workings of the Earth. Furthermore, it may help in understanding more about natural disasters and finding out ways to predict them and saving the lives of countless individuals.

Additionally, this discovery may help in finding out more about new technologies for exploring deep Earth. Overall, this discovery sparks countless mystifying questions about the working of the Earth and leads us to wonder how much more there is to this planet that meets the eye.

A SUPERNOVA TALE

Once upon a time, in a distant corner of the galaxy, a massive star stood as a beacon of light, burning brightly for millions of years. This star was a colossal powerhouse, its core teeming with energy that kept it alive. But deep inside, a constant battle waged. Gravity, the silent force, relentlessly pulled inward, trying to squeeze the star into a tiny, dense ball. Yet, the star resisted, using the energy generated from nuclear reactions in its core to push outward, maintaining its form and luminosity.

However, no star, no matter how mighty, can burn forever. Eventually, this celestial giant exhausted its fuel. With nothing left to sustain the nuclear reactions that kept gravity at bay, the core of the star collapsed under its immense weight. In an instant, the core was crushed, leading to one of the universe's most dramatic events—a supernova.

This explosion was nothing short of spectacular. For a brief moment, the supernova outshone all the stars in its galaxy. The star's outer layers were flung into space, forming a magnificent cloud of gas and dust. But this wasn't the end. The supernova scattered essential elements like iron and gold across the cosmos, sowing the seeds for new stars, planets, and even life.

By: Karieshma Mathur, 7A

FACT

A supernova happens somewhere in the universe every 10 seconds.

SCIENCE MYTHS

Time to know what's true- and what's not...

By: Ghhanali Singh, 9B

Greetings, folks and dearest science nerds! Science has always been a fascinating subject, leading to many theories about a specific topic. But it gets out of hand (and really annoying for us science guys) when so many fake myths spread around, and people believe them quite readily, not caring to recheck them. Here are some common myths and their reality!

DEOXYGENATED BLOOD IS BLUE

Wonder why your blood looks blue when it's actually not? Why does oxygen-less blood look the same as the color of a scaly green monster? This seems like a reasonable theory as veins do appear greenish blue through our skin. However, blood is the same color throughout- red. Oxygenated blood has a brighter hue and deoxygenated blood is darker, but it's red all the same. The reason veins appear is due to the tissue they are made of. Yes, the tissue which covers our veins affects how light is absorbed and scattered, causing it to look blue.

HUMANS USE ONLY 10% OF THEIR BRAINS

Yes, yes, you're not as smart as you think. This is just a feel-good myth that makes you think that you have a lot of brains. Our brain has different parts that play a different role in our body. Any MRI scan can show you that even when saying a few words, the area of your brain that lights up is WAY more than a measly 10%. In fact, scientists haven't discovered even a small part of the brain that doesn't direct emotions or movements or any other function.

WATER CONDUCTS ELECTRICITY

No, this doesn't mean you can bring a toaster into your bathtub. Pure water is an insulator of electricity. The danger comes from the minerals and chemicals in it, which are made up of electrically charged ions. While pure water is theoretically safe around electricity, it's nearly impossible to find in the real world because even distilled water has ions.

CHAMELEONS CHANGE COLOR TO MATCH THER SURROUNDINGS

Quite surprisingly, this is not true. Chameleons do change color by stretching and relaxing cells that contain crystals, which affects how the light is reflected. However, their color changes have little to do with camouflage, as they are unable to change to any other color to blend in with their surroundings. Rather, chameleons use the crystals mostly for temperature regulation (lighter colors reflect the heat) and communication (dark colors indicate hostility, such as when a female does not want to mate). Therefore, the primary functions of color change are communication and temperature regulation.

SCIENCE MYTHS

GOLDFISH HAVE 3-SECOND MEMORIES

Fishies are way smarter than you think! In one study, the ability of goldfish to distinguish between two distinct classical music was carefully examined. Although they were slow learners, the fish would bite a bead linked to the right tune 75% of the time after more than 100 sessions. Such training would not be feasible if their memory was actually three seconds.

OSTRICHES BURY THEIR HEADS IN THE SAND

The poor things would die of suffocation if they did so! Instead, they lay their head and neck flat against the ground when threatened. Their sand coloration can be why many people think they bury their heads!

THE 5-SECOND RULE

Honestly, I hate this one with all my heart. It is exceedingly annoying when one of my peers drops something and picks it up quickly, grins at me cheekily, saying "5-second rule!" and chomps it. WHAT makes you think that microbes would take 5 seconds to stick to food? There is no timer or chance of resurrection for fallen food and it's best that you say goodbye to that fallen cookie and throw it.

IT TAKES SEVEN YEARS TO DIGEST CHEWING GUM

The truth is, your body can't digest chewing gum, even in seven years. The gum simply passes through your alimentary canal without being broken down. However, in rare cases when a large amount of gum is swallowed, it may block your intestines, so it is always advisable not to.

A PENNY DROPPED FROM THE EMPIRE STATE BUILDING COULD KILL A PERSON STANDING BENEATH

Seriously? This myth probably arises from the supposition that due to acceleration and a great vertical displacement; the final velocity will be enough to kill an innocent bystander. Well, hello! Much unlike our physics textbook scenarios, this penny is not under free fall. Things called 'air resistance' exist, and a penny may sting, but will never, ever kill a bystander.

THE DARK SIDE OF THE MOON

No, the "dark side of the moon" is not always dark; it simply refers to the side of the moon that faces away from Earth and is not visible from our planet, but it receives just as much sunlight as the side we see, meaning it experiences day and night cycles like the near side; the term "dark" is more about the fact that we couldn't see it for a long time, not a lack of light.

And there you have it, folks! A lot of these old myths have been busted, which you can now use to correct your friends and relatives, become a perfect know-it-all with actual knowledge. Just be ready to face the large amounts of comments like, 'Oh, really?' and 'Where'd you know that from?' Don't let anyone blind you with these old wives' tales anymore and enjoy the confused looks on the faces of your near ones as you go around bursting their little bubbles! Who knows? Maybe one day you'll bust a myth yourself!

ACADEMICS & ACTIVITIES: A GLIMPSE INSIDE

EXPLORE AND LEARN, WATCH SCIENCE TURN!

To Make Copper Sulphate Crystals

After successfully synthesizing copper sulfate crystals, students gained a deeper understanding of crystallization — how substances transition from a solution to solid crystals. Observing the entire process, from dissolving copper sulfate to the gradual cooling and crystal formation, was both educational and fascinating.

The Laws Of Reflection Of Light

The activity of verifying the laws of reflection was both straightforward and enlightening. It provided students with a hands-on opportunity to explore a fundamental principle of optics and observe the laws of reflection in action through simple yet precise and highly effective experimentation.

The Time Period Of A Simple Pendulum

The activity of measuring the time period of a simple pendulum was both insightful and rewarding. Using a bob attached to a string, students observed its oscillations and recorded the time using a stopwatch. By measuring multiple oscillations and calculating the average, they accurately determined the time for one complete cycle.

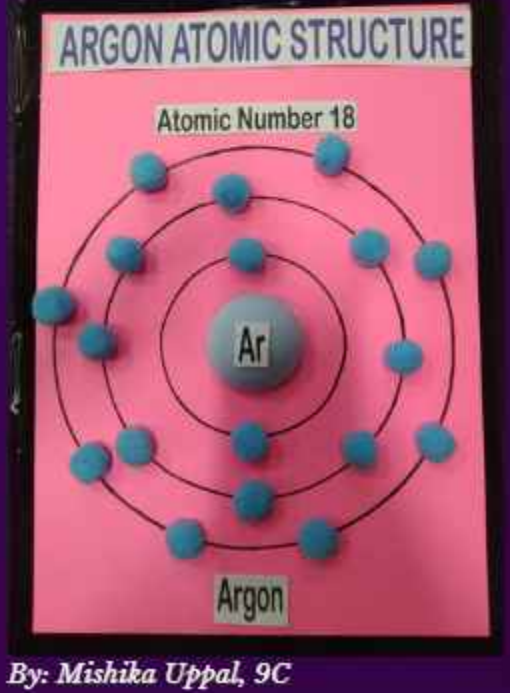
Refraction Through Glass Prism

The activity on refraction through a glass prism was an eye-opening experience, giving the students the chance to visually and practically explore the phenomenon of light refraction and how it causes the dispersion of light into a spectrum of colors. The experiment was both highly engaging and truly informative.

CREATIVITY FLOWS, KNOWLEDGE SHOWS!

ORGANIC COMPOUND STRUCTURE

By: Tanya Rebecca, 11C



By: Mishika Uppal, 9C

ATOMIC STRUCTURES

By: Mehul Aggarwal, 9C


THINK
AND
LINK

FIND AND UNWIND

By: Ria Chaddha, 11C

D	J	N	O	Q	N	W	Q	J	G	S	T	B	R	C	E	C	Z	D	L
B	I	W	Q	M	P	E	L	G	H	W	K	Z	L	M	G	V	F	I	R
X	N	X	P	Q	B	O	B	K	D	V	P	E	X	L	P	L	Y	N	C
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C	M	V	O	Y	A	G	E	R	K	T	N	R	S	D	F	Y	S	C	I
Q	E	X	K	A	H	B	D	K	R	D	W	L	L	C	T	K	W	C	D
F	T	I	P	O	O	I	Z	E	K	Q	W	Y	S	M	M	N	N	O	Y

WORD BANK

Galaxy, Nebula, Orbit, Exoplanet, Asteroid, Comet, Blackhole, Voyager, Astronaut, Starship, Celestial, Navigation

BRAIN TEASERS

By: Ria Chaddha, 11C

Outsmart the Universe: Can you crack these cosmic riddles and think like a true space explorer?

The more you take from me, the bigger I get.
What am I?

Black Hole

You can see me in the sky, but I'm not always there. I change shape, but I'm not alive.
What am I?

The Moon's phases

I don't have a heart, but I can still beat.
What am I?

Pulsar

I have a tail but never wag, I shine but I'm not a star. I visit but don't stay.
What am I?

A Comet

I get smaller as I get older but leave behind bright memories.
What am I?

A shooting star

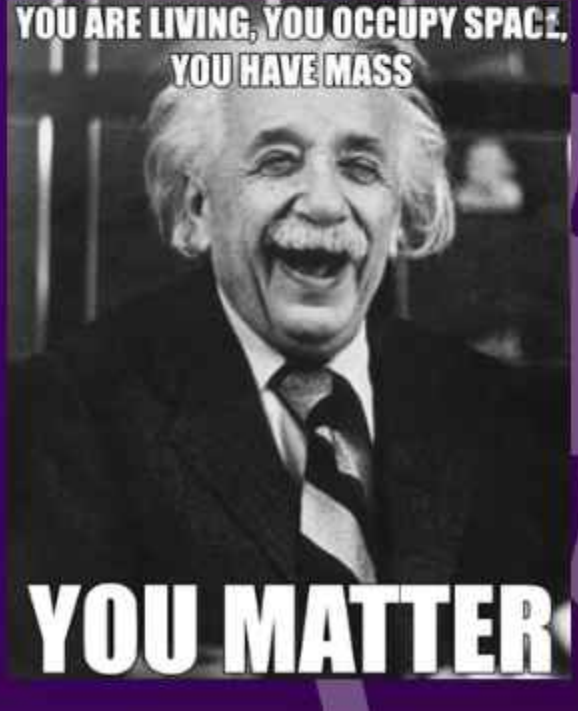
I stretch across the sky, but I have no hands. I am made of billions, yet I am one.
What am I?

A Galaxy


GIGGLES
AND
GRINS

GALAXY OF GIGGLES

Made by: Ruhaan Jagota 11C



Space-Inspired Innovations

The vast expanse of space has inspired groundbreaking technologies, from radiation-resistant materials modeled after cosmic phenomena to propulsion systems mimicking stellar mechanics. These innovations push the boundaries of science while paving the way for a sustainable future in the cosmos and beyond.

THANK YOU FOR READING!

If you have any articles, poems, or creations related to the field of science you'd wish were published in the next edition, please send them at:

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