

Tula's International School

V*i*BE

Future is now

Science
Magazine

Science
World
Personalities

Is Time Travel
POSSIBLE ?

SCIENCE OF
ANCIENT
TECHNOLOGY

BOAT TAIL

Twilight
zone

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CLEOPATRA

Antikythera mechanism: A 2,000 years old analog computer?



This ancient invention was discovered on the small geographically unique Greek island called Antikythera. The device was found in 1901 in sunken wreckage by divers out looking for sponges. It looks like a rock with patches of mold. But, upon further inspection, we will see gears that were functional at some point, pieces that resemble an old clock. The mystery behind the Antikythera did not start to break ground until the 1970s and 1990s. And guess what? It was a computer.

In short, the idea is that it was part of an ancient analog computer complete with bronze components stored in a wooden box. It has been speculated that the ancient invention was used to travel as the device was able to "replicate the motions of the heavens." The device would have not been any bigger than a mantel clock that you have at home. However, rather than display time as we know it, it would display celestial time, using the planets as guides. What is weird about this device is that if it was commonly used, wouldn't we have found more? In the world of archaeology, we have yet to

come across something as sophisticated and advanced...yet.

Like something from a fantastical treasure movie, the discovery of the [Antikythera Mechanism](#) remains a major archaeological head-scratcher.

Found in the sunken wreckage of a Greek cargo ship that is at least 2,000 years old, the circular bronze artifact contains a maze of interlocking gears and mysterious characters etched all over its exposed faces. Originally thought to be a kind of navigational astrolabe, archaeologists continue to uncover its uses and now know that it was, at the very least, a highly intricate astronomical calendar.

It is still the most sophisticated device ever found from that period, preceding the next appearance of similar devices by 1,000

years.



BOT (ARTIFICIAL INTELLIGENCE)



Ameca and Sofia the human robo..the human ai..



Ameca is the world's most advanced human shaped robot representing the forefront of human-robotics technology.

Designed specifically as a platform for development into future robotics technologies, Ameca is the perfect humanoid robot platform for human-robot interaction.

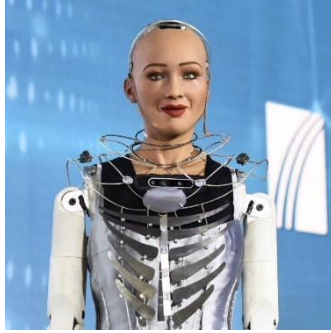
AI x AB

Human-like artificial intelligence needs a human-like artificial body (AI x AB).

Artificial intelligence and machine learning systems can be tested and developed on Ameca alongside our powerful [Tritium](#) robot operating system.

The Ameca hardware is a development based on our own research into humanoid robotics and built on our advanced [Mesmer](#) technology.

Hanson Robotics' most advanced human-like robot, Sophia, personifies our dreams for the future of AI. As a unique combination of science, engineering, and artistry, Sophia is simultaneously a human-crafted science fiction character



Sdepicting the future of AI and robotics, and a platform for advanced robotics and AI research.

The character of Sophia captures the imagination of global audiences. She is the world's first robot citizen and the first robot Innovation Ambassador for the United Nations Development Programme.

On November 21, 2017, Sophia was named the [United Nations Development Programme](#)'s first Innovation Champion for Asia and the Pacific.^[5] The announcement was made at the Responsible Business

Forum in Singapore, an event hosted by the UNDP in Asia and the Pacific and Global Initiatives. On stage, it was assigned its first task by UNDP Asia Pacific Chief of Policy and Program, Jaco Cilliers.

On October 11, 2017, Sophia was introduced to the [United Nations](#) with a brief conversation with the United Nations Deputy Secretary-General, [Amina J. Mohammed](#).^[41] On October 25, at the Future Investment Summit in [Riyadh](#), the robot was "granted [Saudi Arabian](#) citizenship", becoming the first robot ever to have a nationality, described as a [publicity stunt](#)



psych



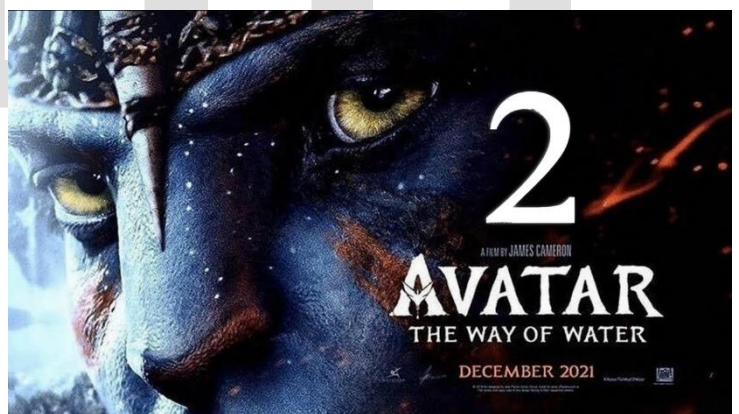
Doctor Strange in the Multiverse of Madness



MOONFALL



Jurassic World Dominion



Avatar: The Way of Water

SCI-FI CHARACTERS



1. IRON MAN

IRON MAN also known as Tony Stark or Tony Stank, is finely defined as “genius billionaire playboy philanthropist”. Iron Man has been a founding member of the superhero team the [Avengers](#). Howard Stark’s greatest creation—a boy genius who enters [MIT](#) at the age of 15 to study [engineering](#). Technically, of course, Tony Stark has no superpower, unless you count his genius-level intelligence. Out of that intelligence, however, was born the Arc Reactor. After he was injured and kidnapped in a warzone, he implanted a device in his chest to keep the shrapnel in his body out of

his heart and It’s Immune To EMP. He then built a suit of iron to fight his way out of captivity, and his alter ego of Iron Man was born. Since then, the reactor has been re-worked and refined over the years, but it remains at the heart (pun very much intended!) of Iron Man. He designed and built all his suits by himself. The gut-punching moment comes in the final act of *Avengers: Endgame* as [Tony embraces what Dr. Strange envisioned](#) as the one way forward for life to persist. Stark wields the stones, lets the cosmic power course through his veins, uses it to kill Thanos,

and dies shortly after as a result.

2. SHURI

Shuri is the Princess of [Wakanda](#) and the leader of the [Wakandan Design Group](#). An innovator responsible for creating much of Wakanda's modern technology, she is also known for designing the current generation [Panther Habits](#). huri was defeated by the Cabal's forces and trapped within a construct of amber similar to [Thane's](#), a construct which left her in a state

of stasis known as "living death."^[4] As Black Panther struggled to find a way to bring his sister's body back to life,^[4] Shuri's soul made its way to the [Djalía](#). [Shuri has a gifted intellectual mind, a genius on par with her older brother, who has a vast, well studied understanding of Wakandan science and technology.](#) [After working to stop an invasion of Wakanda and helping her brother recover after Doctor Doom nearly killed him, Shuri stepped into the spotlight and became the Black Panther herself.](#)





(FAMOUS PERSONALITIES)

MEET THE WORLD'S TOP LIFE SCIENCES
BILLIONAIRES

1. Elon musk

CEO of tesla motors



Elon Reeve Musk is a business magnate and investor. he is the founder, ceo, and chief engineer at spacex; angel investor, ceo, and product architect of tesla, inc.; founder of the boring company; and co-founder of neuralink and openai.

net worth: 21,810 crores usd (2022) [forbes](#), [trending](#)

born: 28 june 1971 (age 50 years), [pretoria](#), [south africa](#)

education: [university of pennsylvania](#) (1992–1997)

2. JIANG RENSHENG AND FAMILY: JIANG RENSHENG

CAME IN AT NO. 69 ON THE FORBES LIST WITH A NET WORTH OF \$24.4 BILLION. RENSHENG SERVES AS CHAIRMAN OF CHONGQING ZFSW BIOLOGICAL PRODUCTS, ALSO KNOWN AS ZHIFEI, A BIOLOGICAL ENTERPRISE THAT SPECIALIZES IN



HUMAN VACCINE PRODUCTION. ZHIFEI WAS THE FIRST PRIVATELY-RUN VACCINE ENTERPRISE LISTED ON CHINEXT.



3. LI XITING: ALTHOUGH LI XITING SITS IN SPOT NO. 82 ON FORBES' LIST OF THE WORLD'S RICHEST PEOPLE, HE HOLDS THE

TITLE OF SINGAPORE'S RICHEST PERSON WITH A WHOPPING NET WORTH OF \$21.5 BILLION. XITING IS FOUNDER AND CHAIRMAN OF MEDICAL DEVICE SUPPLIER SHENZHEN MINDRAY BIO-MEDICAL ELECTRONIC

4. KIRAN MAZUMDAR-SHAW, INDIA-KIRAN MAZUMDAR-SHAW

WAS BORN IN BANGALORE ON THE 23RD MARCH 1953. SHE HEADS BIOCON LIMITED AS THE CHAIRPERSON AND MANAGING DIRECTOR. BIOCON LIMITED IS A BIOTECHNOLOGY COMPANY, BASED IN BANGALORE, INDIA. MAZUMDAR-SHAW IS ALSO THE CHAIRPERSON OF INDIAN INSTITUTE OF MANAGEMENT, BANGALORE.



ss.5 JAMES WATSON-

JAMES WATSON, \$20 BILLION. ACCORDING TO WEALTHY GORILLA, JAMES WATSON IS THE RICHEST SCIENTIST IN THE WORLD AS HE HAS A NET WORTH OF \$20 BILLION. WATSON IS A BIOLOGIST, GENETICIST, AND ZOOLOGIST WHO IS BEST KNOWN FOR HIS WORK ON THE DOUBLE HELIX STRUCTURE OF THE DNA MOLECULE..

6ASHOK SEN

ASHOKE SEN BECAME A MILLIONAIRE OVERNIGHT WHEN HE WON THE \$3M (£1.9M) FUNDAMENTAL PHYSICS PRIZE, THE WORLD'S MOST LUCRATIVE ACADEMIC AWARD, RECENTLY. SCIENCE WRITER PALLAVA BAGLA SPEAKS TO THE PHYSICIST.



WHY?

1. Why does water cleans well ?

Because water molecules are triangular—made of two hydrogen atoms stuck to one oxygen atom—they have slightly different charges on their different sides, kind of like a magnet. The hydrogen end of the molecule is slightly positive, and the oxygen side is slightly negative. This makes water excellent at sticking to other molecules. When we wash away dirt, the water molecules stick to the dirt and pull it away.

2. Why glass breaks easily?

Unlike other solid materials, like metals, glass is made up of amorphous, loosely packed atoms arranged randomly. They can't absorb or dissipate energy from something like a bullet. The atoms can't rearrange themselves quickly to retain the glass's structure, so it collapses, shattering fragments everywhere.

3. Density explains why cold water feels colder than air at the same temperature?

Because water is denser than air, our body loses heat 25 times more quickly while in water than it would in air at the same temperature. Water's density gives it a high specific heat capacity, meaning it takes a lot of heat to raise its temperature even a little, and it's very good at retaining heat or cold (the reason why hot soup stays hot for a long time, and why the ocean is much cooler than land). Water is a great conductor, so it's very effective at transferring that heat or cold to your body.

4. Why Sticky notes come off easily ?

Post-it Notes feature a plastic adhesive that is spread out in blobs across the paper. When we slap a Post-it onto our bulletin board, only some of these blobs (technically called micro-capsules) touch the surface to keep the note stuck there. Thus, we can unstick it, and when we go to attach it to something else, the unused blobs of glue can take over the adhesive role. Eventually, all the capsules of glue will get used up or clogged with dirt, and the sticky note won't stick anymore.

5. Why office buildings are ever-so-slightly taller at night?

After all the employees go home, tall office buildings get just a little taller. A 1300-foot-tall skyscraper shrinks about 1.5 millimeters under the weight of 50,000 occupants (assuming they weigh about the human average).

6. Why does your nose run when you cry?

When we cry, some tears exit our eyes simply by rolling down the length of our face. Others, however, drain through our tear ducts and into your nasal cavity. There, they combine with mucus, generating a surplus of fluid that spills from your nose.

"we're not making more mucus, it's just the tears draining and mixing with the mucus.

7. Why do we make weird faces when we eat anything sour?

That unmistakable sour flavor that prickles us taste buds is a product of the hydrogen ions that acids release when they combine with saliva. When our mouth detects this sign of acid, it lets us know in a dramatic way. Our taste receptors light up and our face twists involuntarily in what's known as a rejection response.

8. Why do truck use diesel fuel instead of gasoline?

One big difference between the two engines is how they turn fuel into energy. According to Engineering Explained, gas engines usually use a spark plug to ignite the mixture of fuel and air in the cylinder. But diesel engines compress the air until it reaches a high enough temperature that the fuel will ignite as soon as it gets injected into the cylinder. In order to heat the air to that point, a diesel engine needs an especially high compression ratio: the cylinder's volume when the piston is at its highest point compared to the volume when the piston is at its lowest point. In other words, diesel engine pistons cover more distance than gas engine pistons.

CHASE (VEHICLES)



1.LAMBORGHINI VISION GT

Lamborghini design DNA and futuristic traits focus on the iconic single center line and the unmistakable silhouette while emphasizing a single seater layout which, in its virtual form, uses the powertrain from the Lamborghini Sián FKP 37. The Lamborghini Vision GT has a spread quad-tire design that reminds us of the Batmobiles from *Arkham Knight* and Zack Snyder's *Batman v Superman: Dawn of Justice*. The fighter jet-like design is also a product of

some serious weight loss. According to Lambo, the V12 VGT weighs only 819 kilos

#Displacement - 6,498 cm³ (396.5 cu in)

#MAX POWER-34hp

#COMBINED POWER - 808hp

#torque -600 pound feet

#Top speed-350 km/h

#0-62mph- <2,8 s

#weight - 819 kilos

2.CHEVROLET CHAPARRAL 2X VISION GT

The 2X is powered by a mid-mounted laser beam-energy propulsion system inspired by advanced technology research that is currently being developed for future space and aircraft projects. The 671 kW laser creates forward momentum by heating the air through pulses of laser energy. The powertrain is revolutionary and is the only car in the entire series to use such a powertrain. An equivalent drivetrain does not exist in reality.

The 671 kW laser, powered by a pack of lithium-ion batteries and an air-powered generator can push this creation to a top speed over 240 mph (385 km/h).

#category- GT Sport only

#ENGINE-Li-ion powered Laser-Pulse

#Drive train- None



#MAX POWER-905hp

#torque -600 pound feet

#Top speed- 409 kilometres per hour (254 mph)

#0-62mph- <1.5 Seconds

#Weight- 450 kilos

#Power/weight ratio- 0.5 kg (1.1 lb) per horsepower



#Top speed - 555.9km/h

#0-62mph- 2.9 sec

4.MERCEDES AVTR



an electric range of more than 700 kilometres. The 33 multi-directionally movable surface elements act as “bionic flaps”. These seats are refined by the vegan DINAMICA® leather. It establishes a biometric connection with the driver and increases his awareness of the environment.

Four high-performance and near-wheel-built 110-kilowatt-hour electric motor motors

#motor: 4x Electric @ 110 kWhMotor

#MAX POWER - 469 hp

#Top speed - 130 mph

3.ROLLS ROYCE BOAT TAIL

The latest, ultra-limited [Rolls-Royce](#) Boat Tail model – the second in a series of just three cars worth around £20 million (over Rs 200 crore) apiece is finished in Cognac, while the sills are painted rose gold. Also available in an oceanic blue infused with shimmering crystals. It is the world's most expensive [street legal](#) new car at US\$ 28 million. The car shares its chassis and engine with the [Rolls-Royce Phantom](#), including five [electronic control units](#) in the rear deck.

. The motor might be linked to a ZF-sourced, satellite-aided, 8-speed AMT gearbox. Only three coachbuilt Boat Tails will be built

#Engine- 6.75-liter V12 engine

#Max power - 563hp

#Torque - 664 pound feet(approx.

The Vision AVTR is a result of the partnership between Mercedes-Benz and Disney and is inspired by Pandora from James Cameron's Avatar, hence the name. The car doesn't have the conventional steering wheel and pedals. Instead, it is operated using control elements on the centre console. This is based on a particularly powerful and compact high-voltage battery. For the first time, the revolutionary battery technology is based on graphene-based organic cell chemistry and thus completely eliminates rare, toxic and expensive earths such as metals. With a capacity of around 110 kWh, it enables

POSSIBLE? (IMAGINARY ASSUMPTIONS)



1. Will Light-Speed Space Travel Ever Be Possible?



The idea of travelling at the speed of light is an attractive one for sci-fi writers. The speed of light is an incredible 299,792,458 meters per second. At that speed, you could circle Earth more than seven times in one second, and humans would finally be able to explore outside our solar system. In 1947 humans first surpassed the (much slower) speed of sound, paving the way for the commercial Concorde jet and other supersonic aircraft. So will it ever be possible for us to travel at light speed?

Based on our current understanding of physics and the limits of the natural world, the answer, sadly, is no. According to Albert Einstein's theory of special relativity, summarized by the famous equation $E=mc^2$, the speed of light (c) is something like a cosmic speed limit that cannot be surpassed. So, light-speed travel and faster-than-light travel are physical impossibilities, especially for anything with mass, such as spacecraft and humans.

2. Is astral projection possible??

Astral projection is an intentional out-of-body experience during which the "astral traveler" goes into a dreamlike but still-conscious state and

visits other realms using the power of their mind. This altered state of consciousness can be achieved by using practices like meditation and self-hypnosis, and is thought to allow people to travel through time, space, and other dimensions. This concept hinges on the idea that humans have "astral bodies" (sometimes referred to as etheric, energetic, or subtle bodies, or souls) and that there's an "astral realm" that transcends the tangible world around us. The idea of an astral realm is found in many different cultures and religions (including in Hinduism and various occult traditions such as Sufism and Kabbalah). When you astral project, it's believed that your soul or etheric body leaves your physical body in order to travel through this other-worldly plane.

Is this scientifically proven?

While science may not be putting its stamp of approval on the concept of astral travel just yet, there has been some research done on the topic. "Studies regarding how the brain reacts during astral projection have found activation within the parts of the brain that govern movement and imagery projection, even while the body remains still," ascension guide and channeler Laura Brown tells Bustle. For example, in a study published in the *Frontiers of Human Neuroscience*, researchers observed a subject's brain while they claimed to be astral projecting. The researchers successfully identified some unique parts of the brain that were active during this alleged journey through the astral plane which shows that astral projection is certainly a perceived experience in the brain of an astral traveler.

3. IS TIME TRAVEL POSSIBLE?

Not only do we know time travel to be possible, but that it is routinely demonstrated by experiments, albeit on a tiny scale. But travelling through time depends on whether we want to get to the future or the past because one is easier than the other.

In 1905, Einstein published his theory of relativity and brought about a scientific revolution. He showed that time is not absolute or

independent of us but can be stretched and squeezed depending on how fast we are moving. In fact, by travelling close to the speed of light you can slow time down so that when you stop, less time has gone by for you than in the outside world and you will find yourself, quite literally, in the future

.

4. CAN HUMANS CREATE LIGHTENING?

: Lightning is generated in the same way that static electricity is generated when you drag your feet on a carpet. A storm cloud or an ash cloud is just a whole mess of feet and carpet. As ash explodes out of a volcano it rubs together. Almost all of that kinetic energy becomes more heat, but a very, very small fraction becomes electrical energy.

It is entirely possible to create static electricity, and even lightning using this method. [Van de Graaf generators](#), for example, use rubbing to generate voltages in excess of a 1,000,000V. However, it's a very inefficient method for generating power. Dynamo generators (the standard generator) are surprisingly efficient.



SIGHT (DAY TO DAY LIFE)

1. Marigold:

- Popularly known as gaenda in Hindi, marigold extract is good for sunburns, acne, and blemishes
- This medicinal herb also soothes ulcers and helps cure digestive problems.



2. **Cinnamon:** Another popular expectorant, dalchini or cinnamon helps cure pulmonary problems such as bronchitis, asthma, and even cardiac disorder and fever.

3. Gulmohar:

Gulmohar has divergent medicinal properties like antibacterial, antifungal, anti-inflammatory, antimalarial, antimicrobial, antioxidant, cardio-protective, gastro-protective, and wound healing activity. Leaves have anti-diabetic properties, using its methanol extract significantly lowers the blood glucose levels.



4. **Periwinkle :** Periwinkle is also used for treating diarrhea, vaginal discharge, throat ailments, tonsillitis, chest pain, high blood pressure, sore throat, intestinal pain and swelling (inflammation), toothache, and water retention (edema). It is also used for promoting wound healing, improving the way the immune system defends the body, and for “blood-purification.”



5. Bougainvillea :

Treat cough
Relieve sore throat
Anti-diabetic
Treat diarrhea
Enhance respiratory



Cure stomachache
Body detoxifier
Ease joints pain
Regulates Blood Pressure
Prevent Inflammation of the Stomach Antiseptic property
Maintaining the Balance of Cholesterol

EARTH LIFE (PLANET EARTH)

VOLCANO



A volcano is formed **when hot molten rock, ash and gases escape from an opening in the Earth's surface.** . The molten rock and ash solidify as they cool, forming the distinctive volcano shape shown here. As a volcano erupts, it spills lava that flows downslope. Hot ash and gases are thrown into the air.

DO YOU KNOW WHAT IS THE HISTORY OF VOLCANO?

~The Greeks and Romans believed the smoke and lava fragments represented the work of the mythical blacksmith "Vulcan," the god of fire. The eruption of Mount Vesuvius, which destroyed the city of Pompeii, occurred in 79 AD.

QUESTION BANK RELATED TO VOLCANO?

Q1.WHAT IS THE SCIENTIFIC NAME OF VOLCANO?

Q2.HOW FAR VOLCANO SHOOTS LAVA?

Q3HOW MANY TIMES VOLCANO CAN ERRUPT?

Q4.WHAT ARE THE SIGNS WHEN VOLCANO IS GOING TO ERRUPT?

ANSWERS

A1~VOLCANOLOGY

A2~1000-2000feet(300-600)ABOVE THE VOLCANO

A3~THER IS NO LIMIT THAT HOW AND MAY TIMES VOLCANO CAN ERRUPT

A4~AN INCREASE IN FREQUENCY AND INTENSITY OF FELT EARTHQUAKE

By **DHAIRYA RAJ**

QUESTION

Q1~Which is the most dangerous volcano in the world?

A1-. **VESUVIUS VOLCANO** IN THE GULF OF NAPLES, ITALY.

What are the 3 main types of volcanoes?

- Cinder Cone Volcanoes.
- Composite Volcanoes (Stratovolcanoes)
- Shield Volcanoes

DO YOU KNOW ?

How Do Volcanoes Erupt?

Deep within the Earth it is so hot that some rocks slowly melt and become a thick flowing substance called magma. Since it is lighter than the solid rock around it, magma rises and collects in magma chambers. Eventually, some of the magma pushes through vents and fissures to the Earth's surface. Magma that has erupted is called lava.

BLUE MARINE LIFE

1. The **Denmark Strait cataract** is an undersea [waterfall](#) found on the western side of the [Denmark Strait](#) in the [Atlantic Ocean](#), on the [Arctic Circle](#) between [Iceland](#) and [Greenland](#). It is the world's highest underwater waterfall, with water falling almost 3,505 meters .



2. **Milky seas**, is a luminous phenomenon in the [ocean](#) in which large areas of [seawater](#) (up to 6,000 sq mi or 16,000 km²) appear to glow [translucently](#) (in varying [shades of blue](#)). Such occurrences glow brightly enough at night to be [visible](#) from [satellites orbiting Earth](#).

3. Twilight zone

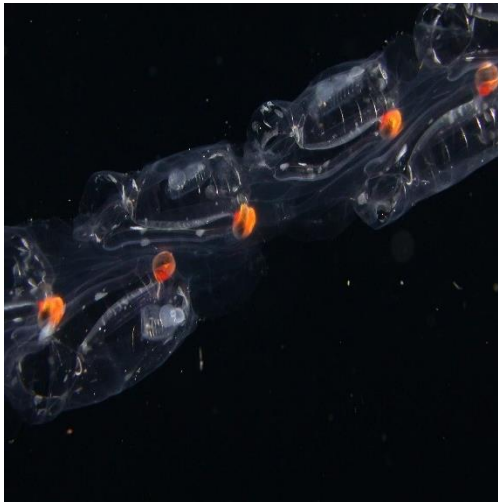
As you dive deeper into the ocean , sunlight leaves sight and about 200 meters beneath the surface, you reach an area called the “twilight zone.” Sunlight



fades almost completely out of view, and our knowledge about these dark depths fades too. The twilight zone's inhabitants are the stuff of fantasy or science fiction. They range from whimsical to terrifying, and are all uniquely suited to life in the cold, deep darkness, where temperatures remain near-

freezing and water pressure can reach 1,500 pounds per square inch. Whether they're microbes, plankton, jellies, or fish, everything living in the zone has evolved incredible adaptations that let them survive under harsh conditions. Many animals, for example, can produce their own light—a trait

called **bioluminescence**—that they use to camouflage themselves, to scare off predators, or even to attract prey.



4. The world's longest mountain chain is underwater.



Earth's longest chain of mountains, the Mid-Ocean Ridge, is almost entirely beneath the ocean, stretching across a distance of 65,000 kilometres. It's said that this mountain chain is less explored than the surface of Venus or Mars.

5. A blue whale's tongue is heavier than an elephant:

As the largest animal on earth, the full-grown blue whale is so heavy, just its tongue can weigh more than an entire elephant- that means that it can be heavier than 7,000 kilograms.

a mention in the holy Quran.





RUMBLE

DO IT YOURSELF: Science can be a little intimidating. Whether it's the latest research in quantum mechanics or organic chemistry, sometimes science can make your head spin. But you don't have to go through 8 years of school or work in a high-tech lab to do science. There are plenty of experiments you can do at home. You might even have a few of the materials just lying around the house.

LETS START:

Rain, Rain, Don't go away.

Make it rain inside your house.

You'll need:

- A plate
- A glass mason jar
- Ice cubes (about one or two cups)
- Very hot water

Place the hot water into the glass jar, about a third of the way up. Put the plate on top of the jar. Place all the ice cubes carefully on the plate. Watch the inside of the jar start to exhibit rain!

Make your own jellyfish.



Now, push the plastic “jellyfish” into the dyed water. Gently add more dyed water on top of it, leaving at least two or three inches of air at the top of the bottle. Tightly secure the top to the bottle, and then allow your children to play with the “jellyfish in a bottle”.

Lets make bubbles with a batter

Experiment: Battery added in salty water to produce bubble.

Material: battery (9v), water, glass and salt.

Procedure:

1. Take water in a glass.
2. Add 2 spoon salt in it and mix it.
3. Put battery (9v) in it.

Result: bubbles will be produce in water.

-Jatin kataria (V)

SANTIZER AND PHENYL CONCENTRATE



Scientific Jokes

Light travels faster than sound. That's why some people appear brighter until you hear them speak.

→ Ritvik K. (xii-sci)

Q: What did the chemist say when he heard oxygen and magnesium were dating?

A: Omg

→ Stephen Iron. (ix)

Q: What do you call it when your science teacher lowers your grade?

A: Bio-degraded.

→ Swastik (xii-sci)

Q: What do protons and life coaches have in common?

A: They know how to stay positive

→ Raghav (xii-sci)

Q: Why is so hard to wake up in the morning?

A: Newton's First Law: A body at rest wants to stay at rest.

→ kushagra joshi (xii-sci)

"Love is on the air"

No it isn't. Nitrogen, oxygen & Carbon dioxide is in the air.

I was reading a book on anti-gravity

I found it difficult to put it down.

- Angel 'VI'

Q: Why did the physicist
break up with the biologist?

A: There was no chemistry.

-dhairya raj.(xi)

Amazing facts

Smoking can void your Apple product warranties

Do you know your Apple product can lose its warranty if you smoke near them? Apple has a policy to safeguard its technicians from any toxic work environment.

Tobacco tars settled on the systems are considered harmful. Hence, Apple can deny servicing your product even if they are in warranty if they believe that it has come into contact with tobacco smoke.

"Phantom Vibration Syndrome" is the name for when someone thinks their phone is vibrating, but it isn't.

NASA's internet speed is 91 GB per second.

Yahoo's original name was a mouthful.

The original URL for Yahoo was akebono.stanford.edu.

People read faster or slower depending on what they read from.

Not only do you blink less when you're on a computer, but reading from a screen also slows you down.

On average, people read 10% slower from a screen than from paper!

CAPTCHA is a long acronym.

It stands for "Completely Automatic Public Turning Test to Tell Computers and Humans Apart".

Even though some artificial intelligence can get through CATCHPA, it's still useful in blocking

Alexa is always listening to your conversations.

This probably isn't new to you. Siri has been doing it forever.

Alexa stores your dialogue history to its cloud to help improve your Alexa experience.

But, you can review and delete these recordings, either in bulk, or individually.

Amazon.com is not the original name of the website.

Jeff Bezos tried several different names for his business before he finalized on Amazon. The very first name he registered was Cadabra Inc

GPS is free... for some.

Even though it is free to use GPS globally, it costs \$2 million dollars to operate every day.

This money comes from American tax revenue.

Every advertisement for iPhone's have 9:41 set as the time.

This is because in 2007, Steve Jobs first announced the iPhone at that time.

The 41 minute presentation leading up to the reveal of the first iPhone was planned perfectly.

And the first photo of the iPhone showed the time 9:41, at exactly 9:41am.

Mark Zuckerberg is color blind.

The founder of Facebook purposely chose a blue color scheme because he has red-green color blindness!

To him, blue is the richest and most prominent color that he can see.

Facts presented by Shreyas Patel of class 8

- The strongest muscle in the body is tongue.
- The name of all the continents end with the same letter they start with.
- It is impossible to lick your elbow.
- A year of Pluto is 247.68 times longer than one of Earth.
- It is not possible to kill yourself by holding your breath.

Power words



XaaS is a branch of cloud computing that delivers various computer-centric services and applications to users digitally via the World Wide Web.

Hyper automation is an innovation that results in the creation of a 'digital twin': *a self-sufficient bot that can conduct a range of sophisticated human tasks, often under pressured environments.*

Quantum computing will continue being a major technology buzzword in 2022. In general, quantum computers can solve much more complex problems than classical electronic computers by using quantum bits (qubits) instead of binary digits (bits). This means that the data doesn't have to be limited to two defined states anymore: 0 or 1. For this reason, quantum computing is much more flexible by allowing computations to be performed in parallel.

Containerization is the packaging together of software code with all it's necessary components like libraries, frameworks, and other dependencies so that they are isolated in their own "[container](#)."



Creative corner

Science and technology are important for our day to day life. It is hard to imagine our life without science and technology. Every day new technologies are coming up which are making human life easier and more comfortable. The discovery of new planets and the establishments of satellites in space is because of the very same science and technology. It has also made an impact on the medical and agricultural fields. The various cures being discovered for diseases `have saved millions of lives through science. The electrical devices without which life is hard to live and imagine like refrigerator, AC, microwave, phones, televisions, washing machines, etc. are a result of technological advancement. Furthermore, if we look at transport, we can quickly reach the other part of the earth within hours, all thanks to science and technology.

- Shreyas Patel Class 8

NOVA



1. What is supernova??

A supernova is what happens when a star has reached the end of its life and explodes in a brilliant burst of light.

Kinds of Galaxies present there.

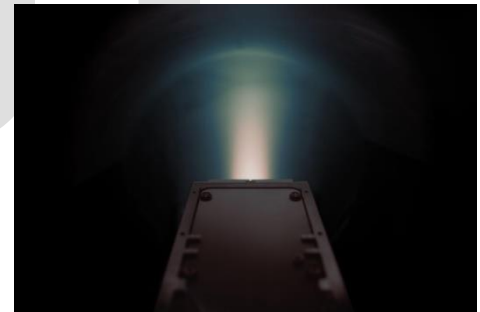
Astronomers classify galaxies into three major categories: elliptical, spiral and irregular. These galaxies span a wide range of sizes, from dwarf galaxies containing as few as 100 million stars to giant galaxies with more than a trillion stars. [Ellipticals](#), which account for about one-third of all galaxies, vary from nearly circular to very elongated. They possess comparatively little gas and dust, contain older stars and are not actively forming stars anymore. The largest and rarest of these, called giant ellipticals, are about 300,000 light-years across. [Spiral galaxies](#) appear as flat, blue-white disks of stars, gas and dust with yellowish bulges in their centers. These galaxies are divided into two groups: normal spirals and barred spirals. [Irregular galaxies](#), which have very little dust, are neither disk-like nor elliptical. Astronomers often see irregular galaxies as they peer deeply into the universe, which is equivalent to looking back in time

2. Iodine Propulsion

Systems Take Flight in Space. Iodine-based ion propulsion could power small satellites and help solve our space junk problem.

“he” spacecraft, launched in 2020, is a type of miniaturized satellite called a CubeSat, weighing about 45 pounds (20 kilograms), and it's the first satellite to use iodine to convert electrical energy to ion propulsion.

More importantly, iodine fuel may also make it easier to equip more low-earth orbit (LEO) satellites with propellant, which could reduce the amount of future space junk, said plasma physicist Dmytro Rafalskyi, who is one of the paper's authors and works for the French aerospace and research company ThrustMe.



3. Long Trips to Space Linked to Possible Brain Damage

Five space travelers had elevated levels of proteins in the blood often seen in people with head trauma and neurodegenerative diseases.

4. Chilean Rocks Aid the Search for Life on Mars.

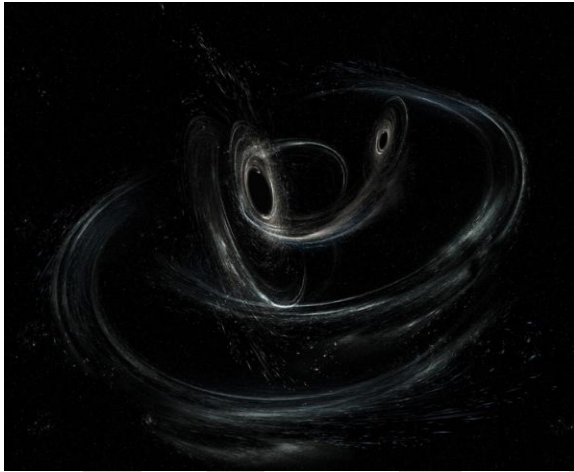
Even if life once existed on Mars, we're probably not going to find any signs as obvious as dinosaur bones or fossilized shells. The red planet's extreme radiation and hostile climate likely would have destroyed all traces of life discernible by galactic paleontologists -- but microbiologists could fare better.

To practice searching for life on Mars, researchers studied rocks from a hyper-arid desert in Chile. The rocks formed during a period of mass extinction 200 million years ago, and they're similar to Martian rocks that could potentially contain telltale vestiges of life. In a first-of-its-kind study, the scientists used a combination of life-detection techniques to examine sediments and learn the stories of ancient critters and their living conditions.

BUZZ (UPDATED SCIENCE NEWS)

Gravitational waves gave a new black hole a high-speed 'kick'

Two black holes united into one, which then sped off at around 5 million kilometers per hour



This black hole really knows how to kick back.

Scientists recently observed two black holes that united into one, and in the process got a “kick” that flung the newly formed black hole away at high speed. That black hole [zoomed off](#) at about 5 million kilometers per hour, give or take a few million, researchers report in a paper in press in *Physical Review Letters*. That’s blazingly quick: The speed of light is just 200 times as fast.

Ripples in spacetime, called gravitational waves, launched the black hole on its breakneck exit. As any two paired-up black holes spiral inward and coalesce, they emit these ripples, which stretch and squeeze space. If those gravitational waves are shot off into the cosmos in one direction preferentially, the black hole will recoil in response.

“Kicks are very important in understanding how heavy stellar-mass black holes form,” Varma says.



Machine learning and gravity signals could rapidly detect big earthquakes Monitoring

speed-of-light changes in Earth's gravitational field could speed up hazard warnings

A magnitude 9 earthquake struck off the coast of Japan in 2011, triggering a tsunami that devastated much of the country's coast, including the city of Otsuchi (shown). Scientists are developing an early warning system that uses AI to detect gravity signals generated almost instantaneously by quakes.

Massive earthquakes don't just move the ground — they make speed-of-light adjustments to Earth's gravitational field. Now, researchers have [trained](#) computers to identify these tiny gravitational signals, demonstrating how the signals can be used to mark the location and size of a strong quake almost instantaneously. Such a system could help solve a thorny problem in seismology: how to quickly pin down the true magnitude of a massive quake immediately after it happens, says Andrea Licciardi, a geophysicist at the Université Côte d'Azur in Nice, France. Without that ability, it's much harder to swiftly and effectively issue hazard warnings that could save lives.

Baby marmosets may practice their first distinctive cries in the womb



Ultrasounds tracking fetal mouth movements pinpoint when vocalization motor skills develop

Baby marmoset monkeys, like the ones shown here, are born knowing how to cry. Ultrasound videos suggest they start practicing the motions in utero.

Cradled inside the hushed world of the womb, fetuses might be preparing to come out howling.

In the same way newborn humans can cry as soon as they're born, common marmoset monkeys (*Callithrix jacchus*) produce contact calls to seek attention from their caregivers. Those vocalizations are not improve, researchers report in a preprint posted April 14 at bioRxiv. Ultrasound imaging of marmoset fetuses reveals that their mouths are already mimicking the distinctive pattern of movements used to emit their first calls, long before the production of sound.

The grand plan to create a periodic table of all animal intelligence

Animal minds are extraordinarily diverse, but a new attempt to categories them aims to reveal the distinct nature of intelligence in everything from dolphins to bees – and even us



Dolphins are well known for their smarts, but many animals possess surprising abilities

You will be familiar with the clever antics of whales and dolphins, chimpanzees and orangutans. But what about wasps? They can recognise human faces. Or crabs? They use stinging anemones to defend themselves against predators. Then

there are alligators that place sticks on their snouts to catch egrets looking for nesting material. And mosquitoes can learn to avoid pesticides after a single taste. Plants show intelligence too. A parasitic vine called a dodder sniffs out its prey with remarkable discernment.



6-YEAR-OLD FINDS MEGALODON TOOTH ON UK BEACH

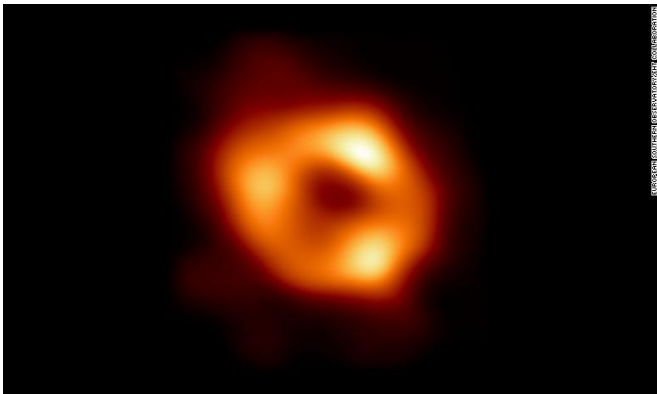
The rare megalodon tooth was 4 inches long.

A 6-year-old boy was looking for shells and fossils with his father on a U.K. beach when

he picked up a rare tooth belonging to a megalodon — the biggest shark that has ever lived.

Sammy Shelton discovered the megalodon tooth on Bawdsey Beach in Suffolk on the east coast of England, as first reported by the Great Yarmouth Mercury, a news outlet covering Great Yarmouth in the neighboring county of Norfolk, where the boy is from. The tooth measured 4 inches (10 centimeters) long.

1st image of supermassive black hole at the center of Milky Way galaxy revealed



It's the first direct observation confirming the presence of the black hole, known as Sagittarius A*, as the beating heart of the Milky Way.

Black holes don't emit light, but the image shows the shadow of the black hole surrounded by a bright ring, which is light bent by the gravity of the black hole.

Astronomers said the black hole is 4 million times more massive than our sun.

"For decades, astronomers have wondered what lies at the heart of our galaxy, pulling stars into tight orbits through its immense gravity," Michael Johnson, astrophysicist at the Center for Astrophysics | Harvard & Smithsonian, said in a statement.

"With the (Event Horizon Telescope or EHT) image, we have zoomed in a thousand times closer than these orbits, where the gravity grows a million times stronger. At this close range, the black hole accelerates matter to close to the speed of light and bends the paths of photons in the warped (space-time)."

"We were stunned by how well the size of the ring agreed with predictions from Einstein's Theory of General Relativity," said EHT project scientist Geoffrey Bower from the Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, in a statement. "These unprecedented observations have greatly improved our understanding of what happens at the very (center) of our galaxy, and offer new insights on how these giant black holes interact with their surroundings."

Monkeypox Spreads to 19 Countries: All You Need To Know

Monkeypox: Bloomberg Opinion's Bobby Ghosh hosted a live Twitter Space discussion with Bloomberg Intelligence senior pharmaceutical analyst Sam Fazeli to get the lowdown on the disease and find out whether we should be worried.



The [World Health Organization](#) has revealed that there are now 131 confirmed cases of monkeypox, and a further 106 suspected cases, in 19 countries. Experts describe the event as "random" but

"containable" and was likely sparked initially by sexual activity at recent raves in Spain and Belgium.

There's currently no cure so we all have to be extra cautious.



.Apple smart water bottle (Hidrate Spark 3) Hidrate Spark 3 smart water bottle helps improve your water intake by tracking your water consumption and lowing when it's time for a drink. The

bright glow and push notifications on your iPhone, iPad, or

Apple Watch will train you to sip more often, inching you closer to your hydration goals.

Hydration equation -

How does Hidrate Spark 3 work? Throughout each day it calculates and adjusts a personalized hydration goal based on your body and activity level. The sensor inside the bottle records how many ounces or millimeters you drink and then records it via the app on your iPhone or iPad.

- **By:Juhi Sobhani(Xii-sci)**

vibe

THANK YOU FOR READING AND ASSIMILATING..

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