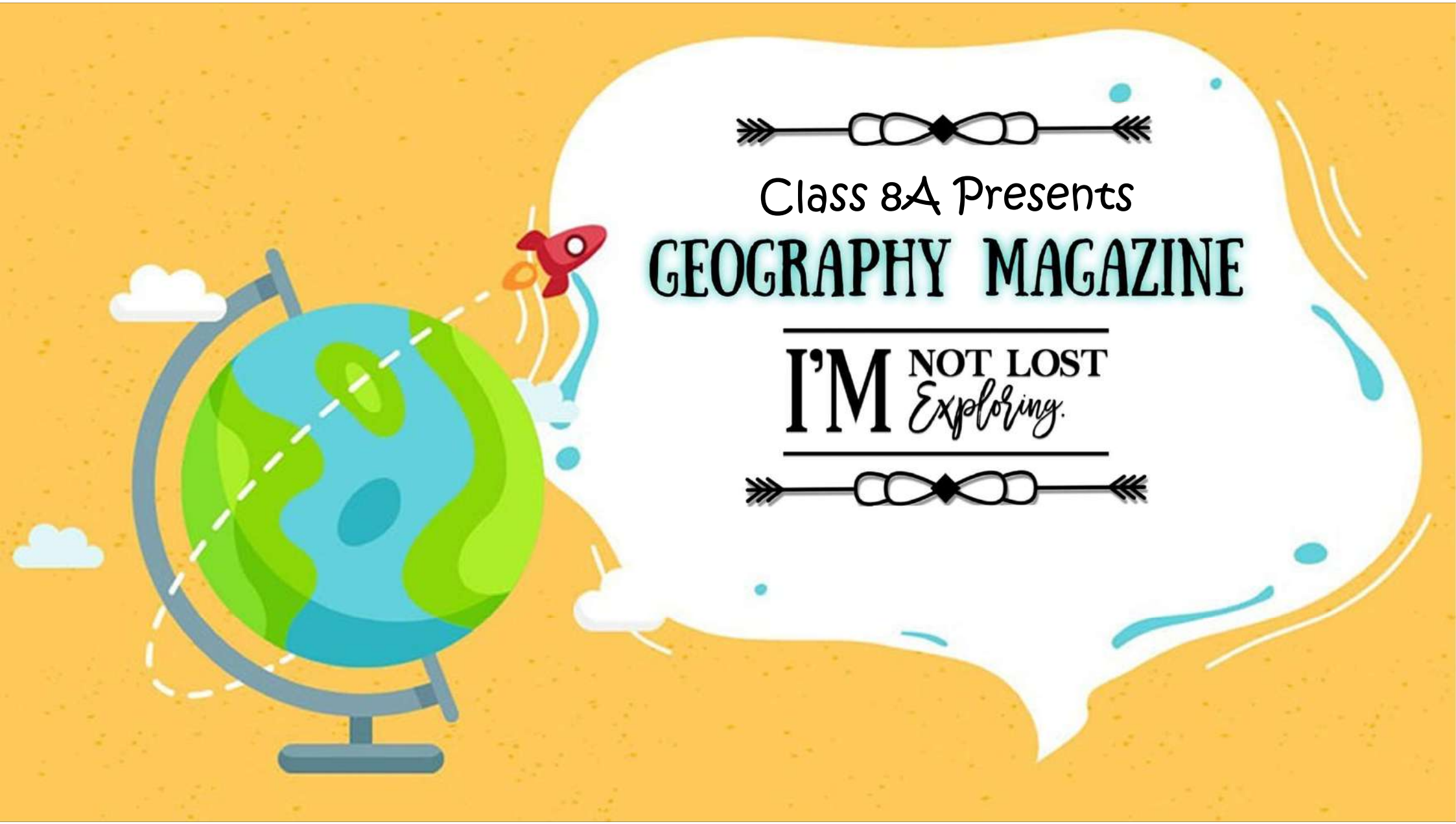

Class 8A Presents
GEOGRAPHY MAGAZINE
I'M NOT LOST
Exploring.


LANDFORMS

HOW WERE THE SIBERIAN CRATERS FORMED?

In 2014, Greg Fiske, a geographer at the Woodwell Climate Research Center, was in Siberia during an unusually hot period when a strange news_story came out. Pilots had flown over the Yamal Peninsula and reported a huge hole in the ground that seemed to have appeared out of nowhere, in the same region that Fiske and his colleague, Sue Natali, were working. Since then, researchers have identified more of these craters across two regions, the Yamal and Gyda peninsulas. They're part of the Siberian tundra, a massive stretch of land in Russia characterized by a layer of permanently frozen soil just below the surface. And, as scientists have found, the holes, which are roughly 65 feet across when first formed, don't show up quietly — they blast into existence. Like slow-motion lava, land in Siberia bubbles up until it breaks, leaving behind a depression called a gas emission crater. The reasons for the formation of these massive holes is still a mystery though many scientists suspect that climate change is playing a role. So far, researchers have gathered that the explosions come from gas, likely methane, building up in isolated pockets across the tundra. The pressure accumulates fast ---the hills that precede each explosion swell in about three to five years --- and when the strain is finally too much, the bubble explodes. Chunks of land, sometimes blow out. Over time, the edge of the hole melts and expands the perimeter as the bottom fills with water, turning the gaping pit into an inconspicuous lake.

NAME- BEDOTROYEE GHOSH
CLASS- VIII A

Rainbow mountains of China

The Rainbow mountain of China within the Zhangye Danxia national park is located in the Gansu province in China's Northwest covering 200 square miles. In 2009, this site was named as UNESCO World Heritage site. It is one of the geological wonders of the world. These Chinese mountains are popularly known for their otherworldly colours that mimic a rainbow painted over the tops of the rolling mountain. The brilliant colours of the rock strata are siltstone and sandstone that was deposited 145.5- 65.6 million years ago in the cretaceous period.

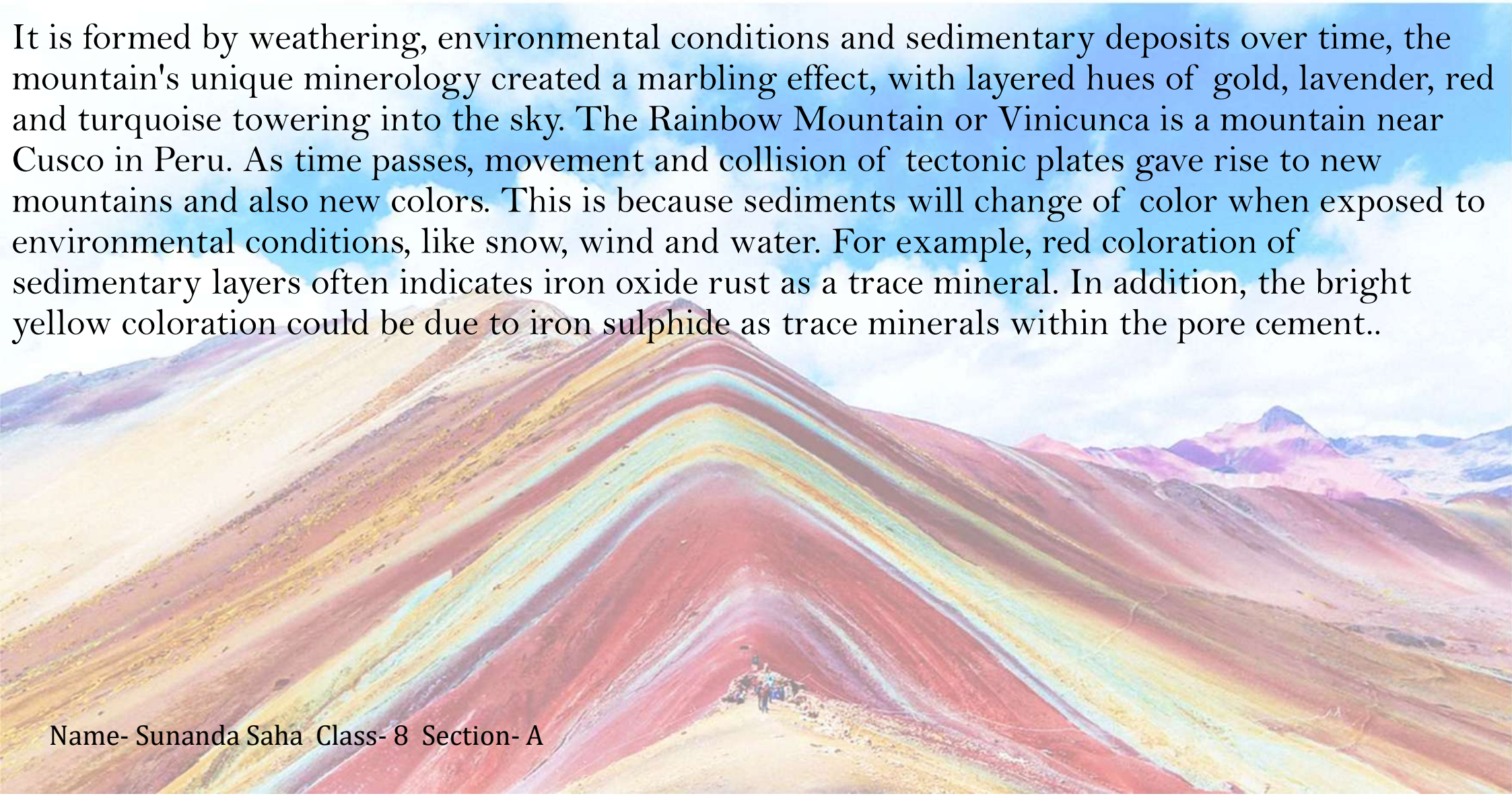
Formation of Rainbow mountains of China

The rainbow striations are the result of centuries of tectonic shifts, climatic conditions, and the erosion of red terrigenous sedimentary beds. The hills represent a sedimentary sequence of Cretaceous age layers of silt, clay and sand with moderate amounts of iron and other metals was deformed and turned into steeply dipping layers. The contained metals had oxidized and stained their host units various colors depending on the metal content and the water regime, oxicising or reducing, abundant or limited, through-flowing or static etc. causing the different pigments to form and stain the layers which appear to have been well insulated from each other, limiting any effects of blending.

There is another rainbow mountain located in the world which is Vinicunca mountains of Peru.

Created by Antika Shaw
Class- 8A

Colourful Mountains

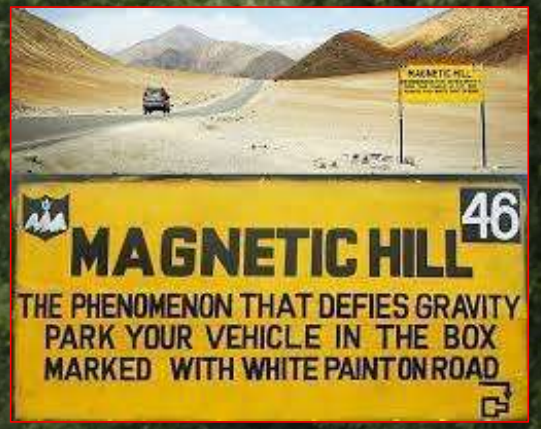


It is formed by weathering, environmental conditions and sedimentary deposits over time, the mountain's unique minerology created a marbling effect, with layered hues of gold, lavender, red and turquoise towering into the sky. The Rainbow Mountain or Vinicunca is a mountain near Cusco in Peru. As time passes, movement and collision of tectonic plates gave rise to new mountains and also new colors. This is because sediments will change of color when exposed to environmental conditions, like snow, wind and water. For example, red coloration of sedimentary layers often indicates iron oxide rust as a trace mineral. In addition, the bright yellow coloration could be due to iron sulphide as trace minerals within the pore cement..

Name- Sunanda Saha Class- 8 Section- A

Mystery of the Magnetic Hills

- What happens at Magnetic Hill? Well, there are a few different theories behind it. As per the most common theory, what is believed to be at work behind this mysterious phenomenon is a magnetic force so strong that it can pull cars uphill. It is in fact so notorious that even the airplanes that fly over this region increase their altitude in order to avoid magnetic interference. Every tourist driver that passes through here would kill the engine to let the tourists experience how the car still kept moving.
- If you however would speak to the locals about it, villagers in particular, they would tell you a different version of the story. As per them, here once lied a pathway that led straight to heaven. People who were deserving of it would automatically get pulled up; however the undeserving ones could never make it up the path; no matter how hard they tried. For them, this entire concept and area is supernatural.

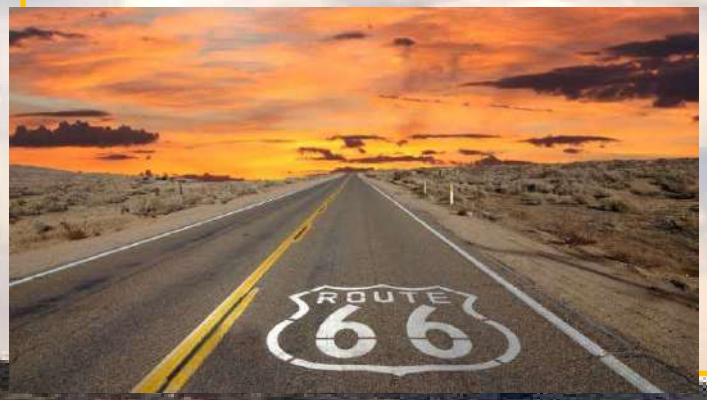


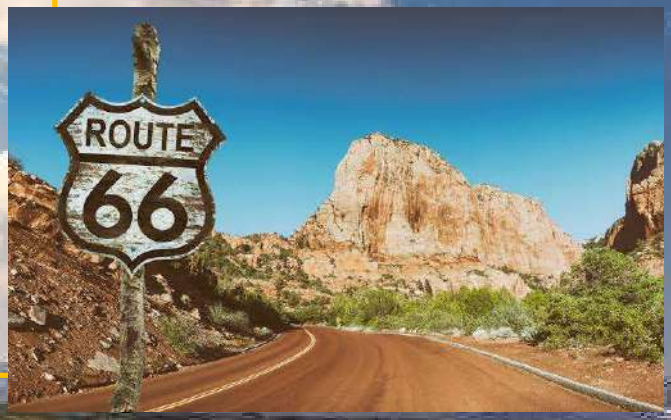
Anshi Chakraborty
Class- 8A

Route 66

The Mother Road

Route 66 is longer than the distance to the Earth's core,





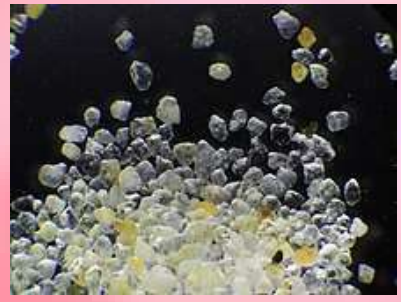
Mantle and core is roughly 3,000 kilometers below our feet—a little less than the total length of America's 'Mother Road,' Route 66," seismologist Jennifer Jackson of Caltech tells Popular Mechanics. "Thought to be a simple interface between solid rocks and liquid iron-rich metal, this remote region is almost as complex as Earth's surface.""Impossible to reach in person, geophysical and experimental studies of this distant region reveal a fascinating landscape of chemical and structural complexity that influence what's happening on Earth's surface," Jackson says. "For example, the complex dynamics of Earth's core-mantle boundary affects Earth's protective geomagnetic field and the motion of tectonic plates.

Shaona Mondal CLASS- 8 A

THE MYSTERY OF THE SINGING SAND DUNES

Um, so, yeah ... the Earth is singing! Well maybe not the planet itself, but a number of sand dunes across the globe — in at least 35 deserts from California and Africa to China and Qatar — are definitely making some intense noise. The sound emission may be caused by wind passing over the dunes .Others have suggested that the frequency of vibration is related to the thickness of the dry surface layer of the sand .

Singing sand dune in Almaty Province, Kazakhstan



Singing sand from Gold Coast, Queensland, Australia under microscope

A more probable reason is the size of the sand grains and particles. There are certain conditions that have to come together to create singing sand . The sand grains have to be 0.1 to 0.5 mm in diameter . The sand should contain silica and needs to be at a certain humidity . The most common frequency emitted seems to be close to 450 Hz.

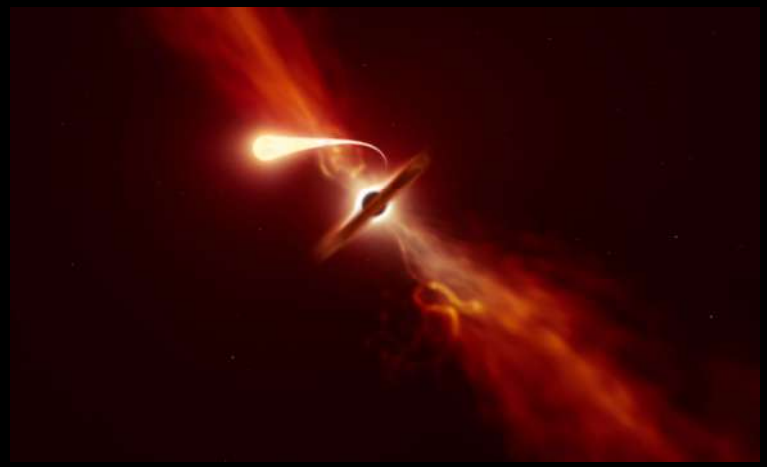
SHIRSHA DAS ; CLASS 8 A


UNIVERSE

DARK STAR IN SPACE

Have you ever heard of a dark star ?

Well, it is actually a big, black giant (commonly known as the black hole) which has so strong gravity that nothing—no particles or even electromagnetic radiation such as light—can escape from it. They are formed when the center of a very massive star collapses upon itself. This collapse also causes a supernova, or an exploding star, that blasts part of the star into space. The nearest Black hole is only 1011 light years away, and was found in a solar system named as HR 6819.



A black hole devours a star by 'spaghettification'

The supermassive black hole at the core of supergiant elliptical galaxy Messier 87, as depicted in the first false-colour image in radio waves released by the Event Horizon Telescope (10 April 2019)

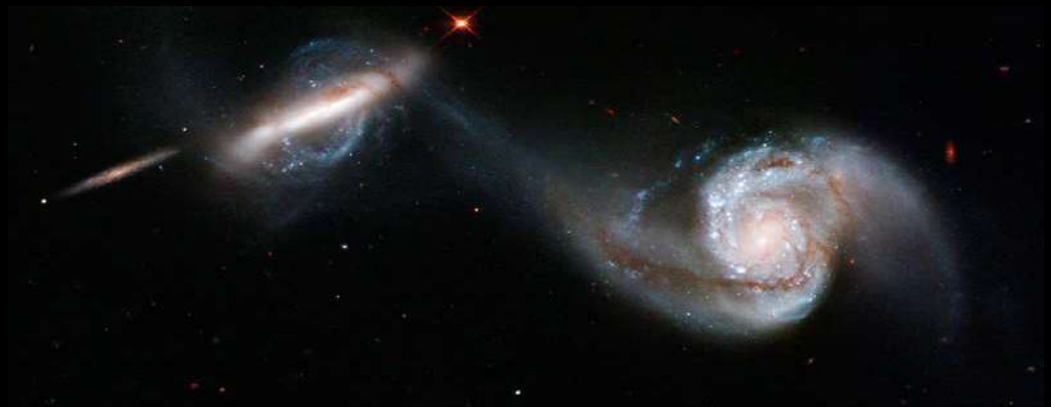
But don't worry, the Earth will not fall into a black hole because it is not close enough to the solar system for that. Even if a black hole were to take the place of the sun, Earth still would not fall in because it would have the same gravity as the sun. It is seen that when a body enters a black hole is changes it's shape turns into a thin strand of spaghetti. Thus this process is also known as 'spaghettification.'

FOR A FREE VIRTUAL TOUR TO A BLACK HOLE PLEASE CLICK ON THE LINK PROVIDED BELOW:

https://youtu.be/uRCX33VWOX0

By: Adrija Chatterjee of Class- 8A

THE ULTIMATE GALACTIC COLLISION



Present position of Milky Way and Andromeda Galaxy

Most of the people know this theory, but do you know what its result will be ?

The two super massive black holes will converge near the center of the newly formed galaxy over a period that may take millions of years, due to a process known as dynamical friction. Some predict a 50% chance that in a merged galaxy, our Solar System will be swept out. The rest predict a 12% chance that the Solar System will be ejected from the new galaxy, however, such an event would have no adverse effect on the system and the chances of any sort of disturbance to the Sun or planets themselves may be remote. The resulting galaxy will be a giant Elliptical Galaxy with a less dense center.

Have you ever wondered what will happen after 4.5 billion years from now ?

Allow me to give you a hypothetical prediction by our astronomical scientists. 4.5 billion years from now, our Milky Way Galaxy will be involved in a supermassive galactic collision with the Andromeda Galaxy and the Triangulum Galaxy (a smaller satellite galaxy of the latter). This is particularly true because the Andromeda Galaxy is approaching the Milky Way at about 110 km/sec.

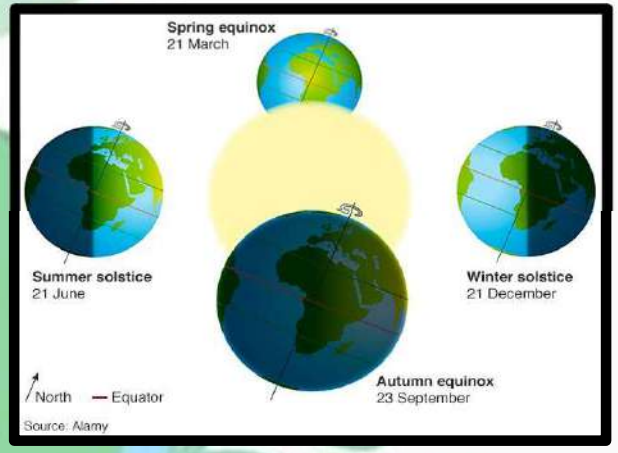
Animated prediction of the Super Massive Galactic Collision

By: Adrija Chatterjee of Class- 8A

WHAT IS EQUINOX?

SINCE ANCIENT TIMES, PEOPLE HAVE CELEBRATED THE ARRIVAL OF SPRING OR AUTUMN AT EQUINOX, A TIME WHEN THE SUN IS DIRECTLY ABOVE THE EQUATOR OF THE EARTH, AND THE EARTH'S DAY IS ALMOST SPLIT INTO HALF. BOTH THE HEMISPHERES RECEIVE ALMOST 12 HOURS OF DAYLIGHT AND NIGHT. EQUINOX TAKES PLACE TWICE EVERY YEAR THAT IS ONCE IN EVERY SIX MONTHS. USUALLY THE EQUINOXES TAKE PLACE ON MARCH 20th AND SEPTEMBER 22nd. THERE ARE TWO TYPES OF EQUINOXES

- VERNAL EQUINOX- SYMBOLIZES THE COMING OF SPRING.
- AUTUMNAL EQUINOX- MARKS THE COMING OF FALL.



WHETHER YOU ARE EXPERIENCING VERNAL OR AUTUMNAL EQUINOX, COMPLTELY DEPENDS ON THE HEMISPHERE YOU LIVE IN. WHEN NORTHERN HEMISPHERE EXPERIENCES SPRING, SOUTHERN HEMISPHERE EXPERIENCES AUTUMN AND VICE VERSA.

HOW DOES IT TAKE PLACE? OUR PLANET NORMALLY ORBITS THE SUN ON AN AXIS THAT IS TILTED AT 23.5 DEGREES. TWICE EVERY YEAR THE AXIAL TILT AND THE EARTH'S ORBIT COMBINE SO THAT THE SUN SITS RIGHT ABOVE THE EQUATOR GIVING ALMOST EQUAL AMOUNT OF DAYLIGHT TO THE NORTHERN AND SOUTHERN HEMISPHERES. THE TERMINATOR OR TWILIGHT ZONE PASSES THROUGH THE NORTH AND SOUTH POLES DIVIDING THE EARTH INTO ALMOST IDENTICAL DARK AND LIGHT ZONES.

Sudakshina Basu 8-A Roll No.- 41

NAME- SARANYA SAHA
CLASS - 8A

EXPLORING NEBULA

WHAT IS A NEBULA?

A nebula is a giant cloud of dust and gas in space also known as interstellar space. Nebulae are the basic building blocks of the universe. Some nebulae (plural of nebula) come from the gas and dust thrown out by the explosion of a dying star. Other nebulae are regions where new stars begin to form. It acts like a nursery for the new stars.

DID YOU KNOW?

The Helix Nebula is a planetary nebula located in the Aquarius. It was discovered by Karl Ludwig Harding. It is one of the closest planetary nebulae to the Earth. It is also referred as the "Eye of God" in the modern culture.

FORMATION OF NEBULA

Nebula is made up of dust, basic elements such as hydrogen, helium, and heavy elements such as carbon, nitrogen, magnesium, potassium, calcium, iron. They either form through clouds of cold interstellar gas and dust or through the aftermath of supernova.

TYPES OF NEBULA

Nebula has been divided into 5 categories- emission nebulae, reflection nebulae, dark nebulae, planetary nebulae and supernova remnants.

THE HELIX NEBULA

DO YOU KNOW ABOUT THE DARK NEBULA ?

Well, it is a cloud that blocks the light from objects behind it. The Horsehead Nebula in Orion is probably the most famous example of Dark Nebula. It is a dark region of dust in the shape of horse's head that blocks the light.

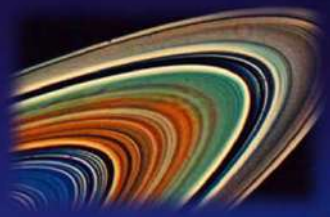
Aurora Borealis

The northern lights, or the aurora borealis, are the beautiful dancing waves of light that have captivated people for millennia. But for all its beauty, this spectacular light show is a rather violent event. Energized particles from the sun slam into Earth's upper atmosphere at speeds of up to 45 million mph (72 million km/h), but our planet's magnetic field protects us from the onslaught. If one of these reaches earth, taking about 2 to 3 days, it collides with the Earth's magnetic field. Northern lights are also called by their scientific name, aurora borealis, and southern lights are called aurora australis.

Why is Aurora Borealis not seen in India?

India is located near Earth's equator. The celestial lights are observed closer to the North Pole in the arctic. The skies light up due to the solar flare activity which interferes with the earth's atmosphere. So, we need to head out towards the north pole to witness it. Hence, the Aurora Borealis or Northern Lights cannot be observed in India.

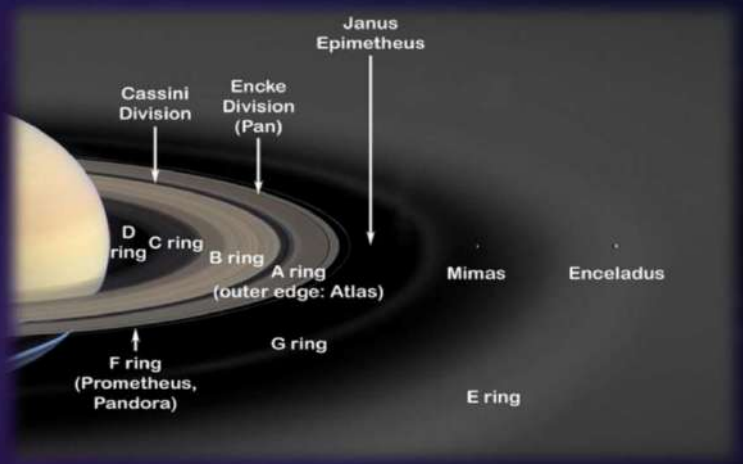
Done By: Anshi Chakraborty and Sunanda Saha of Class 8A



SATURN AND IT'S RINGS

The more we read about space the more we get amazed every moment . Saturn with it's 7 rings is one such planet that we all love to read about.

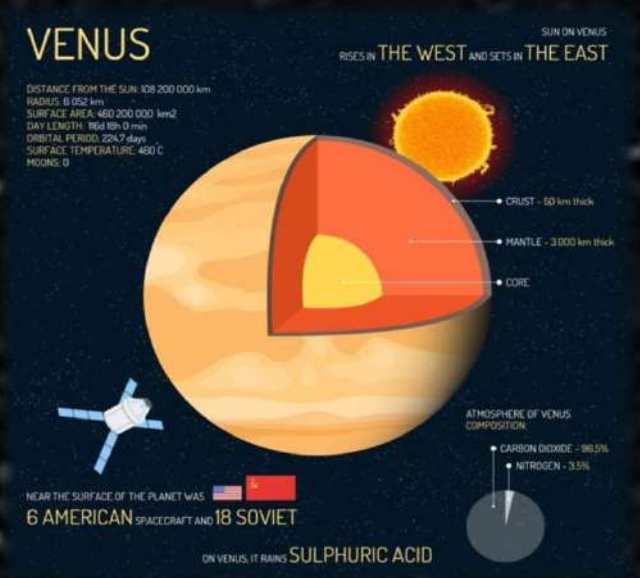
Saturn is the sixth planet in order of revolution, in the family of the sun. It has a diameter of 1,20,536km and is located in orbit about 1427million km away from the sun. Saturn is a cold planet because of it's distance from the sun. It's temperature varies from -180 to -292 degree centigrade. Saturn is one of the four planets that have rings around it. The rings are made of millions of broken fragments coated with ice. These rings are fragments of moon which broke apart and were suspended around the planet millions of years ago. They are 22 times bigger than earth's diameter. Some rings have large frozen rock clusters as a result of which more lights get reflected and these rings seem to have different colors.



Done By: Rupanweeta Das 8A

THE HOTTEST PLANET IN THE GALAXY – VENUS

Venus is the hottest and brightest planet in the sun's family.
The atmosphere of Venus is about 90 times thicker than ours and
Comprised largely of carbon dioxide and clouds. The rays of sun
Are absorbed by the planet's surface and both the carbon dioxide
And clouds around the planet do not allow the heat to escape
Thus causing the greenhouse effect which results in temperatures
As high as 480 degree centigrade.



Surface of Venus

Name – Rupanweeta das , class – 8A

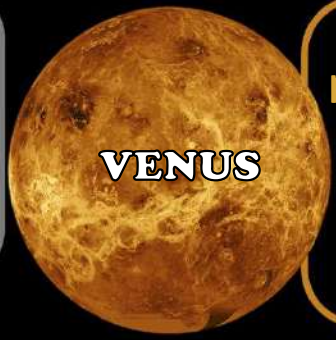
PRECIPITATION ON DIFFERENT PLANETS OF THE SOLAR SYSTEM !

NEPTUNE

These planets are made up of gases. Lightning storms, turn methane into soot and as it falls through the atmosphere, the pressure and temperature turns it into **diamonds**!

MERCURY

No rain as it does not have weather conditions like storms, clouds, winds or rain !



VENUS

Sulphuric acid precipitation is caused by the reaction of sulphur dioxide and water in the planet's atmosphere.

URANUS

These planets are made up of gases. Lightning storms, turn methane into soot and as it falls through the atmosphere, the pressure and temperature turns it into **diamonds**!

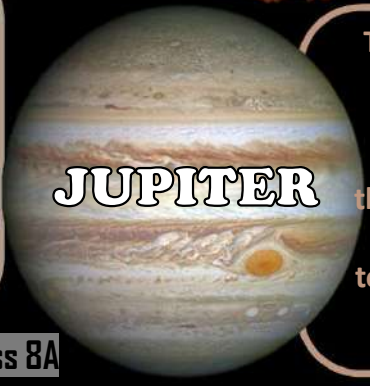
SUN

EARTH

Water droplets condense together to form clouds; when these clouds get too heavy to stay suspended in the clouds, they fall over Earth as **rain**.

SATURN

These planets are made up of gases. Lightning storms, turn methane into soot and as it falls through the atmosphere, the pressure and temperature turns it into **diamonds**!



JUPITER

These planets are made up of gases. Lightning storms, turn methane into soot and as it falls through the atmosphere, the pressure and temperature turns it into **diamonds**!

MARS

No rain as it lost its water and hence, became dry. Water Molecules have been swept up from the Martian Surface due to dust storms.

Done By:- Sunanda Saha, Saranya Saha, Adrija Chatterjee of class 8A


DISASTERS

Waste Dumping in Ocean

What can be Waste Dumping In Ocean?

The most toxic waste material dumped into the ocean includes dredged material, industrial waste, sewage sludge, and radioactive waste. Dredging contributes about 80% of all waste dumped into the ocean, adding up to several million tons of material dumped each year.

What Happens If Garbage Is Dumped Into The Ocean?

If garbage is dumped into the ocean the oxygen in the water could be depleted. This results in poor health for marine life due to lack of oxygen. Animals such as seals, dolphins, penguins, sharks, whales etc could all die. Bottles and other plastics including bags can suffocate or choke sea creatures.

How Does Waste Dumping In Oceans Effects Humans?

If humans are exposed to these toxic dumping for a long periods of time, then this can result in dangerous health problems, which include hormonal issues, reproductive issues, and damage to our nervous systems and kidneys.

Ishani Das Class 8

Why is Cyclone Phailin named so?

'Phailin' is the Thai word for sapphire. The next cyclone in north Indian Ocean will be called 'Helen'.

The cyclone that is headed towards the Andhra Pradesh and Odisha coast along the Bay of Bengal is named 'Phailin'. Phailin is the Thai word for sapphire and according to the followed procedure of naming tropical cyclones over north Indian Ocean it was turn of a name suggested by Thailand in the list of assigned names. The next cyclone in the region will be called Helen, a name from the list of cyclone names given by Bangladesh. The practice of naming tropical cyclones began years ago in order to help in the quick identification of storms in warning messages because names are presumed to be far easier to remember than the numbers and technical terms. Many agree that appending names to storms makes it easier for the media to report on tropical cyclones, heightens interest in warnings and increases community preparedness.

MADE BY: PRIYANSHI JAISWAL OF CLASS 8-A

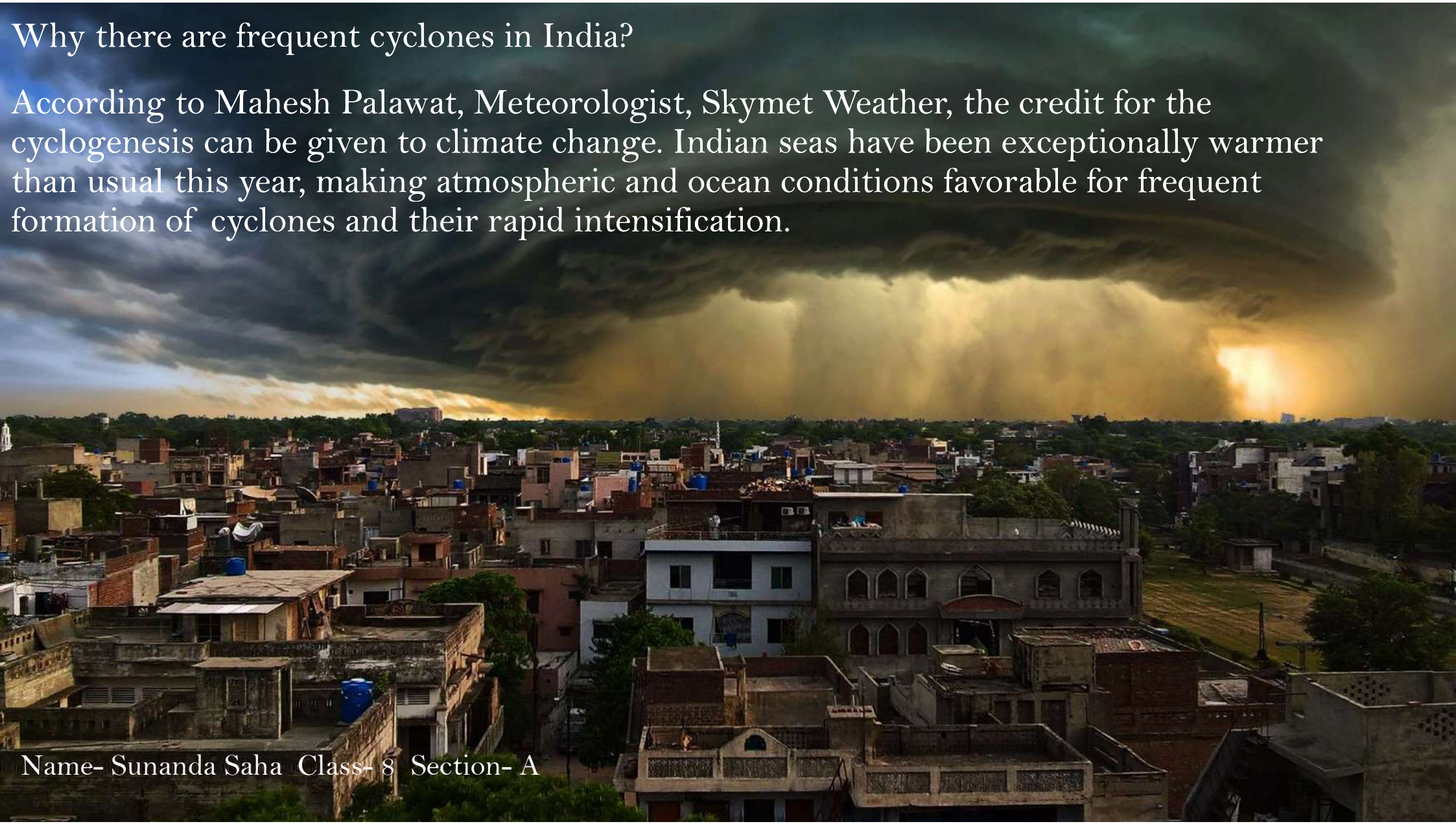
What is Heat Dome?

The phenomenon causing the scorching heat is called a "heat dome." Hot air is trapped by high-pressure fronts, and as it is pushed back to the ground, it heats up even more. “It's sort of like a bicycle pump”.

THE LYTTON WILDFIRE (HEAT DOME)

The wild fire started on 30 June 2021 and it is ongoing. Residents fled on 30 June, many without their belongings, as smoke and flame engulfed the village, which is home to about 250 people and located about 260km (162 miles) north-east of Vancouver. “Within about 15 minutes the whole town was engulfed in flame”.

Name- Sunanda Saha Class- 8 Section- A



Why there are frequent cyclones in India?

According to Mahesh Palawat, Meteorologist, Skymet Weather, the credit for the cyclogenesis can be given to climate change. Indian seas have been exceptionally warmer than usual this year, making atmospheric and ocean conditions favorable for frequent formation of cyclones and their rapid intensification.

Name- Sunanda Saha Class- 8 Section- A

ACID RAIN

How Is Acid Rain Caused?

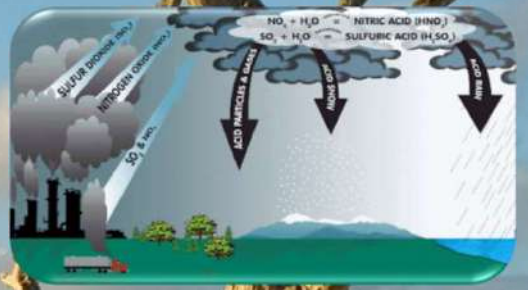
Acid rain is caused by a chemical reaction that begins when compounds like sulfur dioxide and nitrogen oxides are released into the air. These substances can rise very high into the atmosphere, where they mix and react with water, oxygen, and other chemicals to form more acidic pollutants, known as acid rain.

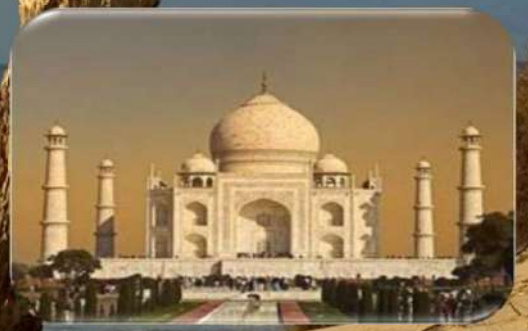
How Is Acid Rain Harmful To Forest?

Acid rain can be extremely harmful to forests. Acid rain that seeps into the ground can dissolve nutrients, such as magnesium and calcium, that trees need to be healthy. Acid rain also causes aluminum to be released into the soil, which makes it difficult for trees to take up water.

What Happens When Acid Rain Falls On Taj Mahal?

When the acid rain attacks or falls on the Taj Mahal the monument gets corroded. Taj Mahal is completely made of marble, acid rains reacts with marble to form a powder-like substance which is then washed away by the rain.





By Ishani Das Class 8A

Why are thunderstorms more common at night?

Some scientists believe that global warming may be contributing to more active lightning storms. The combination of cold winds from the Arabian Sea and warmer air currents from northern India created an unusually large cloud cover, spanning 124 miles and inflating the risk of lightning storms,

Andhra Pradesh records an electrifying night with 36,749 lightning strikes in just 13 hours.

Name- Sunanda Saha Class- 8 Section- A

Why does the Pacific and the Atlantic Ocean never mix?

Picture: A

We often think that most of the Earth is surrounded by water, then why are different names given to the different oceans? They are all water and water is same everywhere. So why do we learn so many names? But that isn't the situation. Every ocean is distinguishable at their meeting points. They all meet but never mix.

Among them one of the most distinguishable is the meeting point of the Pacific and the Atlantic Ocean at Cape Horn. You can see the contrast in the picture A. So why does it happen? Nobody poured colour in the ocean water. The reasons are as follows:

- Density: *The two oceans have different density though both are waters. The two oceans have different amount of salt concentration. Due to the difference in salt concentration, the mass increases and as mass and density are directly proportional their density varies.*
- Halocline: *Halocline appears when the one liquid is 5 times saltier than the other. Here Atlantic is more saline than the Pacific. This makes the density different and prevent the two liquids to dissolve forming a horizontal line.*
- Temperature: *When water is heated its volume increases. As the volume is inversely proportional to density the density differs causing the waters never to mix.*
- Current: *The sky blue colour of Shallow Tropical Shelf is of Atlantic current and The dark blue colour is for the Pacific current. Thus, this conditions triggers the condition even more.*

Picture: B

Aishani Basak of 8A

The Hottest River in the World

Aishani Basak of 8A

Everyone of us know that the Amazon river in South America has earned the title of the largest river in the world i.e. the river with the most volume. But do you know the hottest river in the world?

Well it is Shanay – Timpishka (means 'boiled by the heat of the sun') a tributary of the Amazon river which flows from Augua Caliente to Pachitea River and as the name suggests the water actually boils. You might think it awkward or senseless that how can water boil throughout the year? Is there some heater or something? To be true it is so.

To understand this we need to know how the hot springs are formed. Hot springs can be formed in the following two ways:

- The layers of the underground rocks get warmer by depth. The water settles at each level. The water at the bottom layers absorb heat from the rocks and become hot. If they rush out to the surface rapidly they do not get the time to cool down and they form hot springs on the surface. This is known as the geothermal water.

- In the volcanic region the water at the deeper levels mix up with the molten core and becomes hot. It comes out through the fault and forms a hot spring.

Geothermal water makes Shanay – Timpishka as the hottest river as there is no volcano close by. The temperature of the water ranges from 45 °C to 100 °C or above. If you want you can literally boil a raw egg in that water. Many animals die due to the high temperature and even the steam can make a person almost faint. So there is no habitation of fish or other marine creatures in the river. It is considered to be holy and sacred by the locals and they use it carefully and wisely. So what do you think isn't this marvellous?

BLOOD FALLS OF ANTARCTICA

Amid Antarctica's vast stretches of glittering white snow and ethereal blue glacier ice is the famous Blood Falls. Situated at the terminus of Taylor Glacier in the McMurdo Dry Valleys, Blood Falls, which is an iron-rich, hypersaline discharge, spews bold streaks of bright-red brine from within the glacier out onto the ice-covered surface of Lake Bonney. The cause of this color was veiled in mystery for nearly a century, but we now know that the iron-rich liquid turns red when it breaks the surface and oxidizes---the same process that gives iron a reddish hue when it rusts. The deep red coloring is due to oxidized iron in brine saltwater, the same process that gives iron a dark red color when it rusts. When the iron bearing saltwater comes into contact with oxygen the iron oxidizes and takes on a red coloring, in effect dying the water to a deep red color.

NAME- BEDOTROYEE GHOSH
CLASS- VIII A

WHERE DID ALL THE WATER COME FROM?

Water, water everywhere. It covers 70 percent of Earth's surface which earns it the nickname "the blue planet." And yet… where did it come from? How is it so abundant on our planet when it's almost nonexistent throughout the rest of our solar system? Water was formed of hydrogen in the Big Bang and oxygen explosion. Most scientists believe that when planet Earth formed, about four and a half billion years ago, it was a dry, rocky planet. The most popular scientific theory states that the H_2O arrived in the form of several enormous asteroids filled with ice. Another suggests that the water actually has been around since Earth's formation, and that the forming Earth retained it from the cloud of gas and dust that formed the solar system.

NAME- BEDOTROYEE GHOSH
CLASS- VIII A

THE RED RIVER

Rio Tinto, the red river, runs through Andalusia in south-western Spain. The river looks harmless enough, except that it is a rusty red color. This comes from running through a countryside that is rich in minerals, and where copper, silver, iron ore, and other minerals have been mined for some 5,000 years. It is the iron salts and sulfates in particular which give the water its red color, and the very low pH of 1.7 -2.5, meaning high acidity. But while no plants manage to grow near it, there are anaerobic bacteria that seem to thrive in the water, making it unsafe for humans, but exciting for scientists who are exploring potential life on other planets.

KANKANA DHAR CLASS- 8A


MYSTERIES
DANGER!

The mystery of the Bermuda Triangle

When Christopher Columbus sailed through the area of his first voyage to the New world, he reported that a great flame of fire(probably an asteroid)crashed into the sea one night and a strange light appeared in the distance a few weeks later. He also wrote about erratic compass readings, perhaps because at that time a silver of the Bermuda Triangle was one of the few places on Earth where true north and magnetic north lined up.

The Bermuda triangle also known as the Devil's triangle is a region in the western part of the North Atlantic ocean roughly bounded by Miami, Bermuda and Puerto Rico where dozens of ships and planes are alleged to have mysteriously vanished. It covers a distance of 500,000 square miles of ocean off the Southeastern tip of Florida.

List of incidents in Bermuda triangle

- Sea venture (1609)
- Patriot (1812)
- USS Epervier (1815)
- Mary Celeste (1872)
- Ellen Austin (1881)
- S.V. Spray (1909)
- USS Cyclops(1918)
- Carroll A. Deering (1921)
- Proteus and Nereus(1941)
- Flight 19 (1945)
- PBM Martin Mariner (1945)
- The C-54 (1947)
- Tudor Star Tiger (1948)
- Flight DC-3 Disappearance (1948)
- Flight 441 Disappearance(1954)
- USS Scorpion (1968)
- Navion A16 (1973)
- SS Poet (1980)
- Fishing Boat (2003)
- SS El Faro (2015)

- Mitsubishi MU-2B-40 (2017)

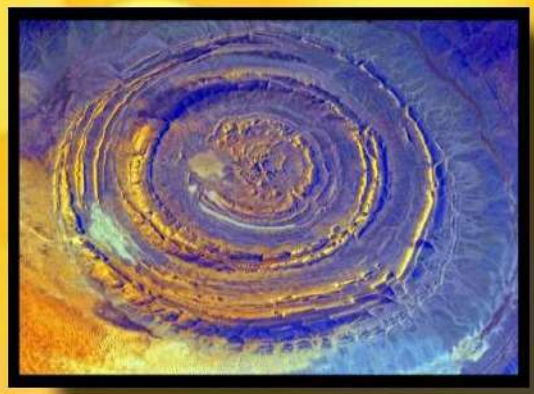
Myths or reality

There have been many theories about why it all occurs in that area, starting from waterspouts to aliens and even sea monsters. A team of American scientists from the University of Colorado analyzed satellite weather images of this area and noticed a series of hexagonal clouds on them. The meteorologists theorized that these clouds might act like real air bombs. It is believed that they are the main cause of the deadly blasts of air which can easily exceed 170 miles per hour. Another theory is that The rogue wave is where several waves come together and create a Superwave. Or it can even be an asteroid that Columbus saw and is still present at the bottom of the ocean.

MADE BY: ANTIKA SHAW OF CLASS 8-A

THE EYE OF THE SAHARA

The Eye of the Sahara, more formally known as the Richat structure, is in the western Sahara Desert in Mauritania. On the ground, it's about 25 miles across.It turns out that we really discovered this incredible bull's-eye in the sand only when humans were sent into space.But even now that we've found it, scientists don't fully understand it. It is an eroded geological dome, 40 kilometres (25 mi) in diameter, exposing sedimentary rock in layers which appear as concentric rings. Igneous rock is exposed inside and there are spectacular rhyolites and gabbros which have undergone hydrothermal alteration, and a central megabreccia. The structure is also the location of exceptional accumulations of Acheulean archaeological artifacts.



KANKANA DHAR CLASS 8A

THE DOOR TO HELL

The gas crater is near the village of Darvaza, also known as Derweze. It is in the middle of the Karakum Desert, about 260 kilometres (160 mi) north of Ashgabat, the capital of Turkmenistan. The gas reserve found here is one of the largest in the world. The name "Door to Hell" was given to the field by the locals, referring to the fire, boiling mud, and orange flames in the large crater, which has a diameter of 70 metres (230 ft).[9] The hot spots range over an area with a width of 60 metres (200 ft) and to a depth of about 20 metres (66 ft)

KANKANA DHAR CLASS 8A

THE GREAT BLUE HOLE

Part of the Lighthouse Reef System, The Great Blue Hole lies approximately 60 miles off the mainland out of Belize City. A large, almost perfectly circular hole approximately one quarter of a mile (0.4 km) across, it's one of the most astounding dive sites to be found anywhere on earth. Inside this hole, the water is 480 feet (145 m) deep and it is the depth of water which gives the deep blue color that causes such structures throughout the world to be known as "blue holes."

KANKANA DHAR CLASS 8A

DEVIL'S KETTLE WATERFALL

If you've ever worried that we've solved all the mysteries of nature, fear not. Minnesota's Devil's Kettle Falls has been puzzling hikers and geologists for generations. The strangest thing about this waterfall is that it has two different bodies of falling water . It is located in Minesota , USA .At one point, a large jutting rock formation splits the Brule river, resulting in two waterfalls which forms the Devil's Kettle. One side does the typical waterfall thing, but the other side falls into a hole known as the Devil's Kettle. And then, it just completely disappears, a mystery that has been baffling visitors and scientists for ages. Common sense would suggest that the water reappears somewhere in nearby Lake Superior, but researchers have tried every trick to locate the missing water — including dying the water and adding ping pong balls — to no avail.

SHIRSHA DAS ; CLASS 8 A

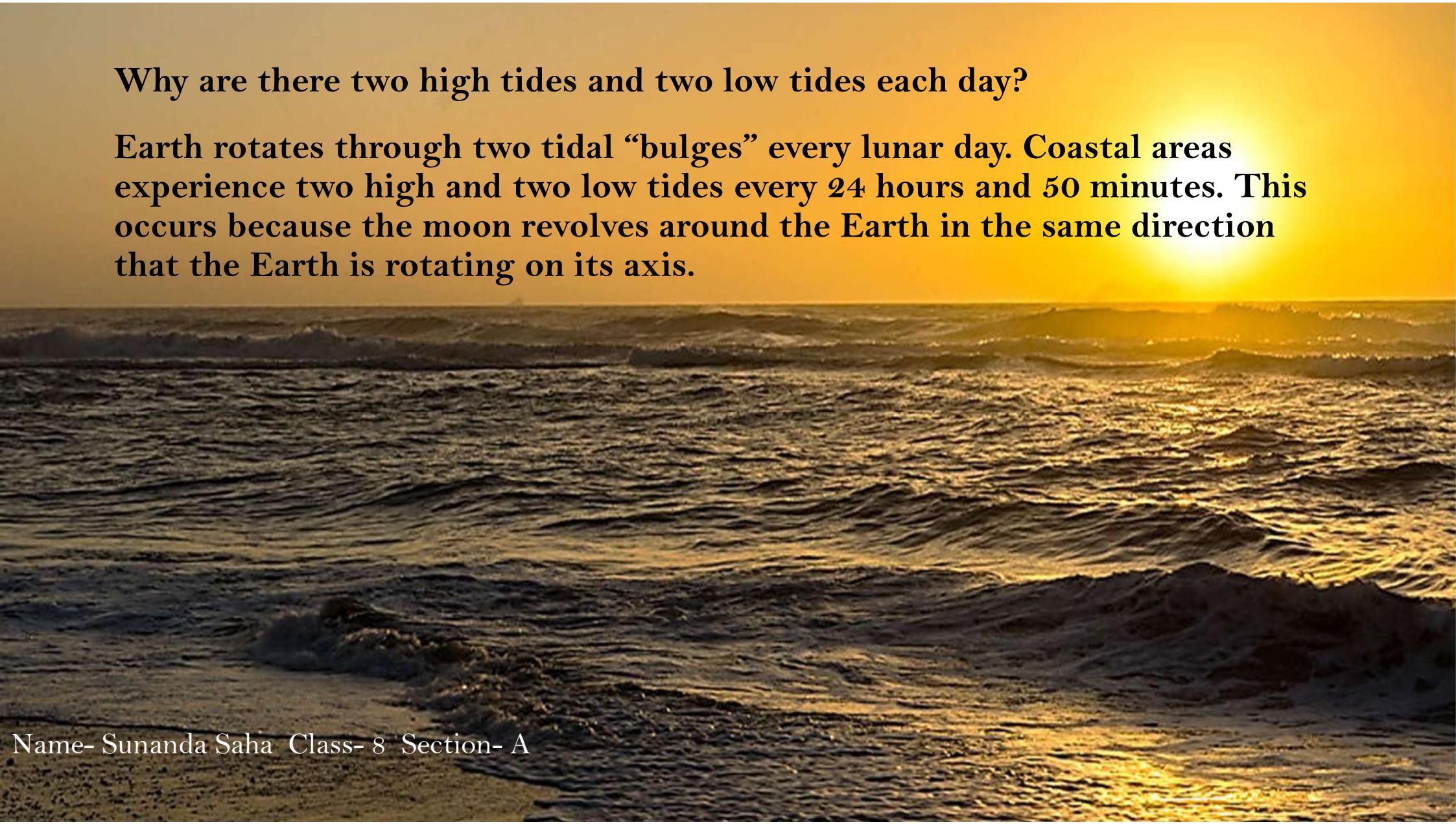
MOVILE CAVE

Can you believe that there is a place on earth with its own ecosystem and atmosphere similar to another planet ? Movile Cave in South-Eastern Romania remain completely closed in darkness for 5.5 million years. Scientists and geologists carved out an opening to it and found that it completely sustained an ecosystem thriving inside. As a pathway was carved through the rocks the geologists found a lake of Sulphuric water that smelt like rotten eggs. The air was filled with Hydrogen Sulphide and had 100 times more Carbon-dioxide than Earth's air. Needless to say this area is completely toxic . What's even crazier is that a whole ecosystem has been existing in this cave with 33 species that cannot be found anywhere else on Earth. This cave gives us a glimpse of what could possibly exist on other planets with completely different atmospheres.

UNKNOWN SPECIES FOUND IN THE MOVILE CAVE

SHIRSHA DAS ;
CLASS 8 A


Explosion of Life!
MISCELLANEOUS



Why are there two high tides and two low tides each day?

Earth rotates through two tidal "bulges" every lunar day. Coastal areas experience two high and two low tides every 24 hours and 50 minutes. This occurs because the moon revolves around the Earth in the same direction that the Earth is rotating on its axis.

Name- Sunanda Saha Class- 8 Section- A

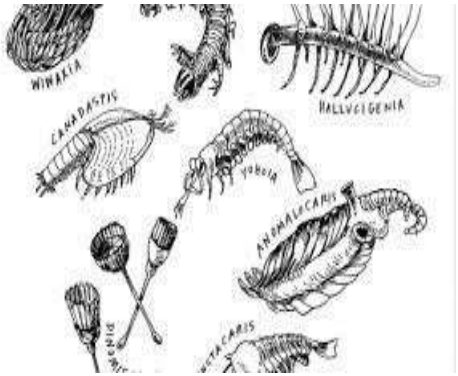
WHY IS THE SKY BLUE?

YOU ARE SITTING BY YOUR WINDOW, LOOKING UP AT THE BRIGHT BLUE SKY. THE SUN SHINES BRIGHTER THAN EVER, BIRDS CHIRP MERRILY AND CLOUDS OF PUREST WHITE ADORN THE BLUE HUE OF THE SKY. WHAT A BEAUTIFUL DAY INDEED! BUT, HAVE YOU EVER WONDERED, WHY THE SKY IS BLUE? THEN YOU ARE AT THE RIGHT PLACE. I HAVE A LOGICAL ANSWER TO YOUR QUESTION!THE WHITE LIGHT COMING FROM THE SUN IS A MIXTURE OF THE SEVEN PRIMARY COLOURS NAMELY RED, ORANGE, YELLOW, GREEN, BLUE, INDIGO AND VIOLET. AMONG THEM VIOLET HAS THE SHORTEST WAVELENGTH WHILE RED HAS THE LARGEST WAVELENGTH. THE WAVELENGHTS INCREASE FROM VIOLET TO RED. NOW THE EARTH'S ATMOSPHERE IS COMPOSED OF GASES, DUST PARTICLES, WATER VAPOUR AND WATER DROPLETS. AMONG THE GASES, NITROGEN IS PRESENT IN ABUNDANT QUANTITY, AT AROUND 78% FOLLOWED BY OXYGEN, APPROXIMATELY 21% AND THE REMAINING IS FILLED WITH CARBON DIOXIDE, ARGON AND OTHER GASES. WHEN SUNLIGHT STRIKES THESE MOLECULES IT GETS SCATTERED. HOWEVER ALL LIGHTS DON'T SCATTER EQUALLY. ACCORDING TO THE RAYLEIGH LAW OF SCATTERING, LESSER THE WAVELENGHT OF LIGHT, MORE IS THE SCATTERING. THEREFORE THE LIGHT VIOLET, INDIGO AND BLUE WILL SCATTER MORE THAN THE OTHERS. THIS IS WHY THE SKY APPEARS BLUE. HOWEVER YOU MAY ASK WHY DOES THE SKY NOT APPEAR VIOLET, BECAUSE THAT IS THE LIGHT THAT HAS THE MINIMUM WAVELENGTH. THIS IS BECAUSE THE HUMAN EYE IS MORE SENSITIVE TO BLUE LIGHT THAN TO VIOLET.

Sudakshina Basu 8-A Roll No.-41

The Cambrian Explosion

Cambrian explosion, the unparalleled emergence of organisms between 541 million and approximately 530 million years ago at the beginning of the Cambrian Period. The event was characterized by the appearance of many of the major phyla (between 20 and 35) that make up modern animal life. The Cambrian explosion provides the first evidence of predator-prey interactions. It led to a huge diversity of animal species. Jawless fish similar to the modern day hag fish.

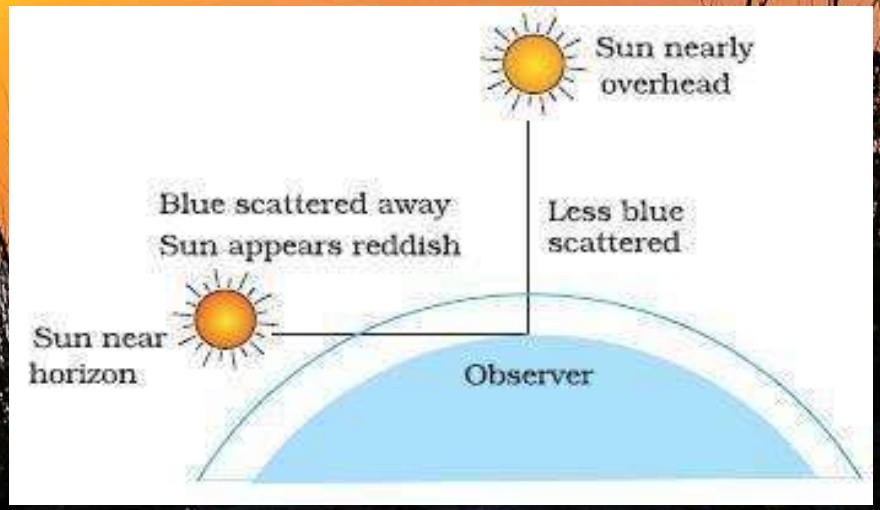


Despite the evidence that moderately complex animals (triploblastic bilaterians) existed before and possibly long before the start of the Cambrian, it seems that the pace of evolution was exceptionally fast in the early Cambrian. Possible explanations for this fall into three broad categories: environmental, developmental, and ecological changes. Any explanation must explain both the timing and magnitude of the explosion.

Anshi Chakraborty
Class – 8A

What makes the sky change the colour during sunset and sunrise?

The sun is low on the horizon during sunrise or sunset, sunlight passes through more air at sunset and sunrise than during the day, when the sun is higher in the sky. More atmosphere means more molecules to scatter the violet and blue light away from your eyes. If the path is long enough, all of the blue and violet light scatters out of your line of sight. The other colors continue on their way to your eyes. This is why sunsets are often yellow, orange, and red.



Name- Sunanda Saha Class- 8 Section- A

Why does not birds fly in other layers of the atmosphere other than troposphere?

Troposphere is the only atmospheric layer that support life. The rapid decrease in air density explains why birds only fly in the lower layer of the atmosphere that is troposphere where they find air dense enough to carry them. Some species of birds have been reported to fly in lower layers of the Stratosphere. Rüppell's griffon vulture and Bar-handed goose are some examples of high flying birds.

Name- Sunanda Saha Class- 8 Section- A


THANK
YOU