

ISSUE: I

# AURORA

*Fall in love with Aurora*

GEOGRAPHY DEPARTMENT  
NALBARI COLLEGE,  
NALBARI

# AURORA

ISSUE - I



**ANNUALLY PUBLISHED  
E-MAGAZINE  
2023**

# AURORA

ISSUE-I 2023



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Thanks : All present and former students of Geography Department and all the well wishers of Nalbari College.

N.B: For any objectionable elements, the writer will responsible.

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**Dr. Kamal Nayan Patowary**  
**Principal**  
**Nalbari college, nalbari**



**Principal's**

**Pen**



**It** gives me immense pleasure to know that the students of geography department of Nalbari College are going to publish an online journal “AURORA” from this year. This is a bold initiative. A person busy with numbers always has a flagship idea in his or her mind. The flagship ideas are the real need of the hour. Science creates many things, but these are always in our nature or around us. Simply, we start recognizing those things with new scientific inventions. But numbers are the creation of human imagination. These are not in nature. The human mind creates numbers, and that is why **it** becomes the main force behind every scientific discoveries. So the efforts that the young geographical mind of our college put in arranging the words in pages of AURORA certainly be remarkable one. **I** hope this venture will remain as a guiding spirit of innovation in years to come.

**Dr. Kamal Nayan Patowary**

Hitesh Thakuria

HOD Department of geography

Nalbari College, NALBARI



# HOD's

# Pen



Everyday digital media becomes more important as a means of receiving, producing, sharing and broadcasting information. There is no doubt that digital publications have always been a great option that provides a whole new world for magazine design. It makes me immense pleasure to note that the students of our Department of geography are bringing up their first issue of digital magazine Aurora for the year 2023 that go forth and do yourself proud...

This e-magazine is a mirror reflecting the creativity of young minds of our students. I hope that such endeavour would continue in future as well.

I congratulate all the contributors and editorial group for their sincere effort in bringing out this e-magazine. This is a platform for you to reflect your vibrant talents in a creative way.

-Hitesh Thakuria

# EDITORIAL NOTE

As we continue to navigate through a rapidly changing world, the team at Aurora is dedicated to bringing you insightful and thought-provoking content that not only informs but also challenges your perspectives. Our mission is to be a beacon of light in a world that often feels dark and uncertain.

In this issue, we explore a wide range of topics, from age-old geographical roots to modern age ideas, from fun-filled geographical facts to unknown knowledge. We also feature theoretical as well as relevance of applied geography in today's world . We also include picture from the world's perspective to local geographical scenario.

We believe that knowledge and understanding are crucial for personal growth and positive societal change, and we strive to bring you content that promotes both. We welcome your feedback and suggestions, and we look forward to continuing to provide you with engaging and enlightening content.

Thank you for your continued support

The Aurora Team



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**THE NORTHERN LIGHT**



# Aurora

Auroras are the vibrant displays of red, green, and purplish-blue lights that appear around earth's poles, sometimes seeming to shimmer or pulse in the night sky. Auroras Seen In the northern hemisphere are called the Aurora Borealis, or northern lights, while displays around the southern hemisphere are called the Aurora Australis, or southern lights.

Auroras aren't visible while the sun is shining, but our stormy star is the source of these nighttime shows. The Sun generates a constant stream of charged particles, or plasma, that's ejected in all directions into space. When this so called solar wind slams into the invisible magnetic field surrounding earth, it produces currents of particles, mostly electrons, which flow toward the poles. In the upper atmosphere, solar particles collide with gas atoms and "Excite" them with the extra energy, which then gets released as light.



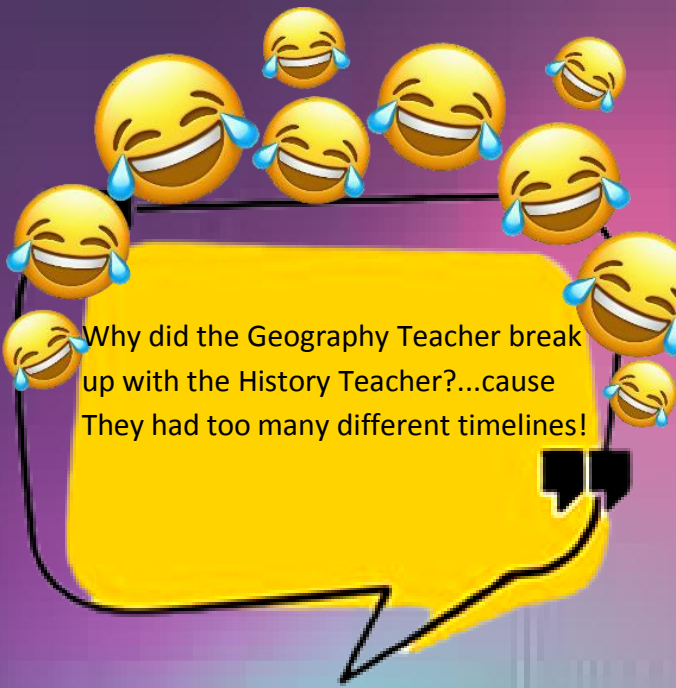
An aurora's brilliant colors are determined by the compositions and densities of atmospheric gases—mostly oxygen and nitrogen—found at different altitudes. Reds are the highest of the auroral colors, appearing above 150 miles (240 kilometers). It takes almost two minutes for an excited oxygen atom to emit a red photon, and if the atom collides with another air particle before releasing its light, the color may never emerge. That's why red appears only in the thinner air found at very high altitudes. bright greens are most common 150 to 60 miles (240 to 100 kilometers) above earth. Green photons are discharged in less than a second, so they're able to occur in the moderately dense atmosphere at middle elevations. in the very thick lower atmosphere, less than 60 miles (100 kilometers) above the planet's surface, we see a purplish mixture of red and blue lights—the signature colors of molecular nitrogen.

Under the right conditions, auroras might be seen at any time of the year from many places around the globe. But the light shows are far more common closer to the poles, in chilly hot spots such as Alaska,

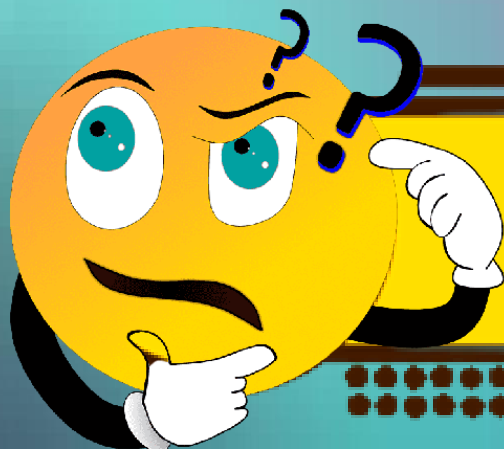
Earth isn't the only planet to boast auroras. All of the planets in our solar system are subject to the solar wind, so all planets with a dense enough atmosphere—and even some moons—can produce auroras. But not all auroras are alike. Venus, for example, has no GLOBAL MAGNETIC FIELD, so its auroras are very irregular. Uranus and Neptune's Magnetic Fields aren't aligned with their rotational axes, so their auroras may appear near their equators. The Gas Giants Jupiter and Saturn, meanwhile, have magnetic fields that act more like our own, so their supersized auroras tend to form around their poles and take similar shapes.

~ SIMANTA KALITA

6TH SEM



Why did Geography book break up with the History book? Because it said "India is the largest democracy in the world" and the History book said "No, it's the United States."



# SOME FACTS ABOUT GEOGRAPHY



1. **Mount Everest**, the tallest mountain in the world is not actually the tallest mountain in terms of distance from its base to its peak. That title belongs to Mauna Kea In Hawaii, which measures over 10,000 meters from its base on the ocean floor to its peak.



largest desert in the world and is home to some of the world's most unique species, such as the Bactrian Camel and the Snow Leopard.

2. The Gobi Desert, located in China and Mongolia, is the fifth



3. The largest river in the world by volume of water is the Amazon river in South America.



4. The Dead Sea, located between Jordan and Israel, is the lowest point on land on earth, with a surface elevation of -430.5 meters below sea level

5. The Sahara Desert in north Africa is the largest hot desert in the world covering an area of over 9 M square kilometer.



6. The Himalayas, which stretch over 2,400 kilometers through Nepal, India, Bhutan, and Tibet, contain the highest concentration of peaks over 8,000 meters in the world

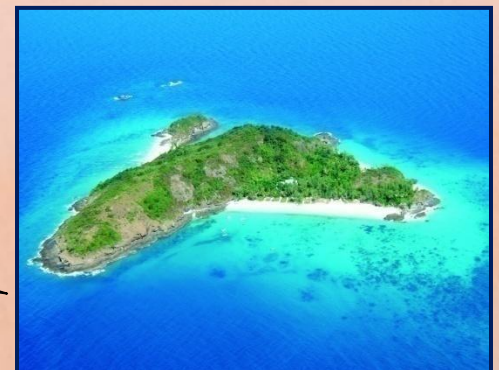


7. The City of Istanbul , Turkey is the only in the world that sits on two Continents: Europe and Asia.



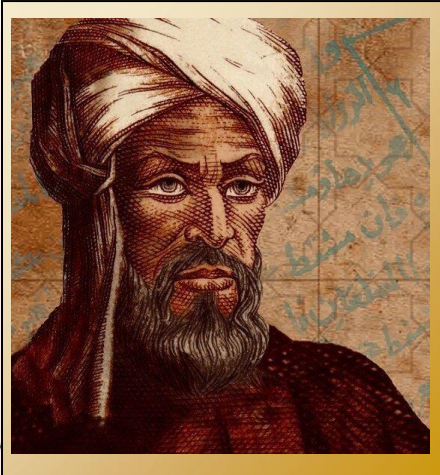
8. The world's largest water fall by volume of water is the angel falls in Venezuela, which drops 979 meters from the top of Auyan-tepui mountain.

9. The Island of Madagascar, located off the coast of Africa is home to more than half of the world's species of primates including lemurs.



# GEOGRAPHERS

Geographers are the scientists who study geography. Geographers study human society and the natural environment, besides studying the interrelationships between them. For instance, geographers study how human society affects the natural environment and the natural environment, on the other hand, influences the human society. Following are some geographers:



1. Muhammad Ibn Musa al-Khwarizmi : He was a Persian scholar who lived between the years 780 and 850 CE. In the year 833 CE, he wrote a book entitled the "Book of the Description of the Earth". The book was a collection of thousands of city coordinates, and borrowed greatly from work by Ptolemy that was published in the 2nd century



3. Claudius Ptolemy was a famous geographer from the time of the ancient Roman Empire, living from the years 100 to 170 AD. Ptolemy is credited with inventing the idea of longitude and latitude, and for mapping thousands of places at a time when this was not yet a common activity, even among educated populations.

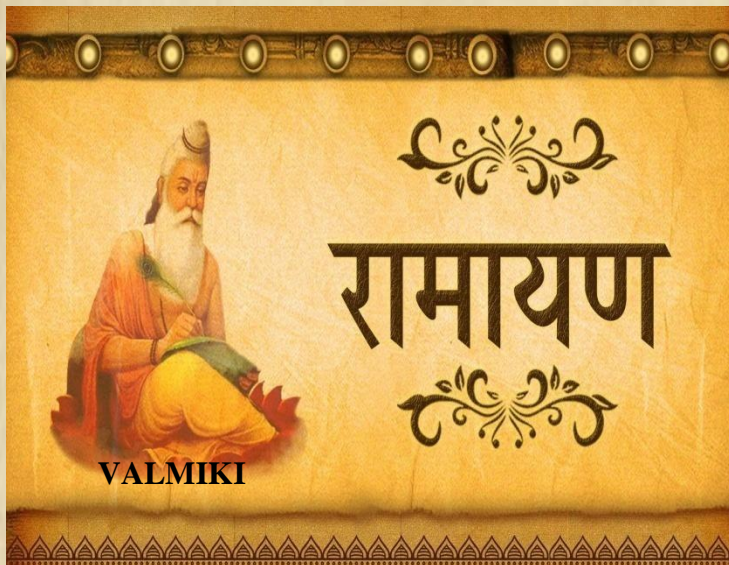


2. Alexander von Humboldt was born in September 1769 in Berlin. He was an explorer, geographer, polymath, and a naturalist, who is known to be an influential advocate of romantic philosophy and science. Humboldt is also considered to be the father of modern geography.

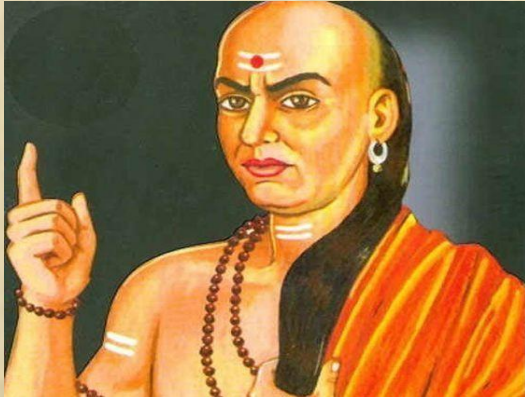


4. Sir Halford John Mackinder was born on February 15th, 1861 in Gainsborough, England and was a geographer and politician who was knighted in 1920 for his work. He is well recognized as an educator and famous for his geopolitical concepts. He was a founder of the London School of Economics.

CONTRIBUTION OF PROMINENT  
INDIAN GEOGRAPHERS TO THE  
EVOLUTION OF GEOGRAPHICAL  
THOUGHT....



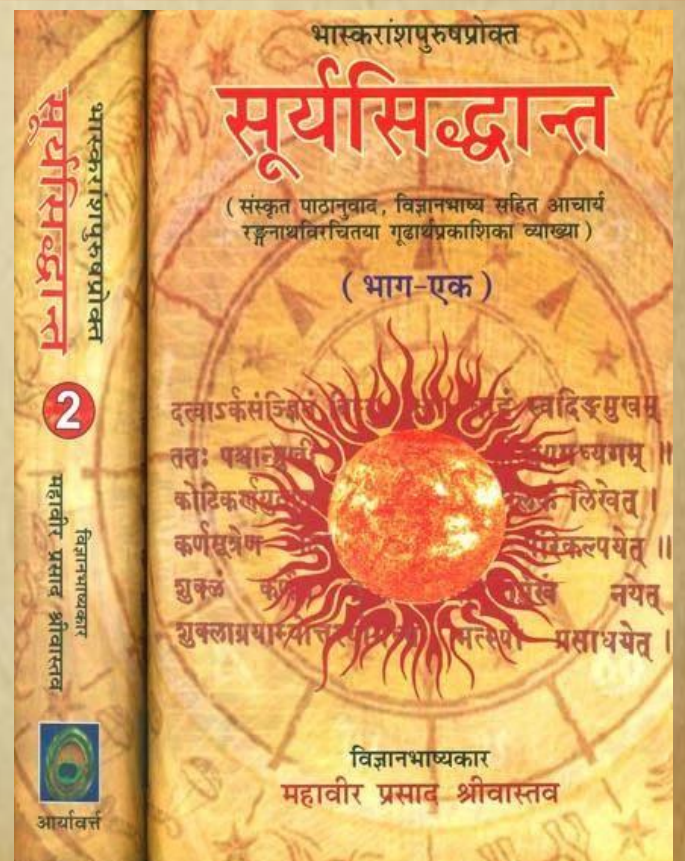
Rishi Valmiki mentioned the 6 types of seasons in his holy text "RAMAYANA". Name of the six seasons is Basant (Spring), Grisham (summer), Varsha (monsoon), Sharad (Autumn), Hemant (winter), and Shishir (Severe winter). He also mentioned the characteristics of each season and the Basant (spring) season is best among them.



ARYABHATTA

The term Bhugol (that is geography) was first time mentioned in Surya Sidhanta written by Aryabhatta around 500 CE. In the book, the diameter of the earth was calculated as 8,000 miles (very close to modern calculation).

In Surya Siddhanta, we can find much geographical knowledge such as the spherical shape of Earth, calculation of Yugas (geological time), eclipse, and color of the eclipse. Aryabhatta pointed out that a lunar eclipse happens due to the shadows of the earth on the moon.

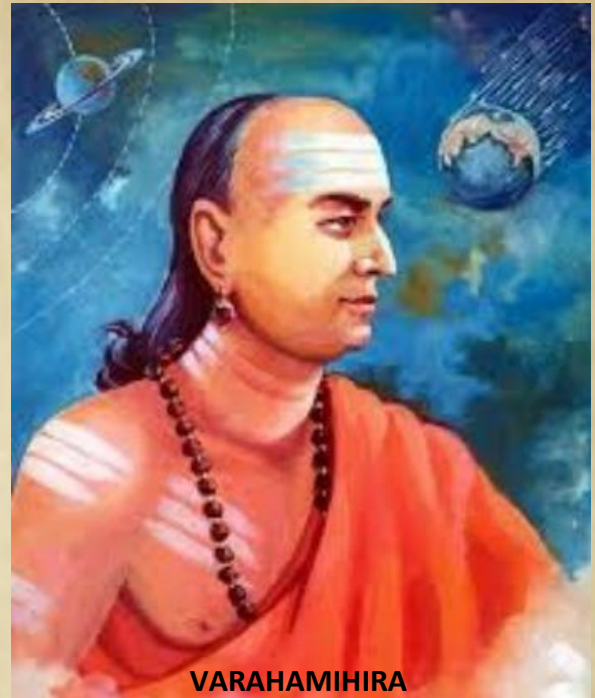


**Contribution of Varahamihira to geography:**

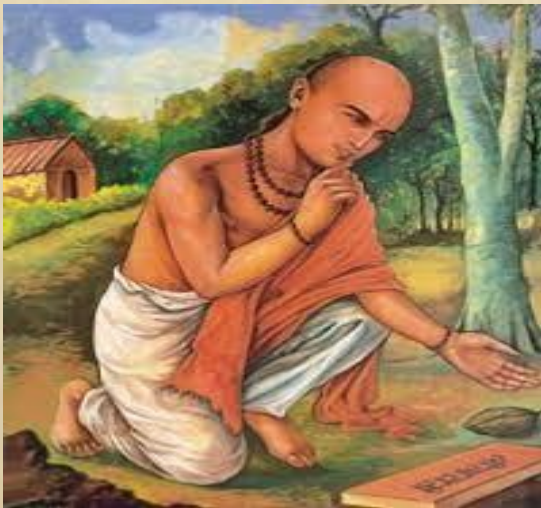
Most of the geographical knowledge of Varahamihira was mentioned in his book "Panch Sindhantika".

Varahmihra explained the eclipse concept. As per Varahmihra, if solar and lunar eclipses occurred in the same month, it leads to disaster. It was also forbidden to see the eclipse from the naked eye. Modern geographers and scientists also suggest the same things.

Varahamihira also mentioned the spherical shape of the earth and the earth attracts all the things towards it due to gravitational forces.



**VARAHAMIHIRA**



**BHASKARACHARYA**

**Contribution of Bhaskaracharya to geography:**

Bhaskaracharya wrote a treatise on the gravitational force of the earth. He also told that all the celestial bodies move in their orbits in the universe due to their attractive powers and remain stable. Bhaskaracharya also calculated the circumference and diameter of the earth which is very close to modern calculations.

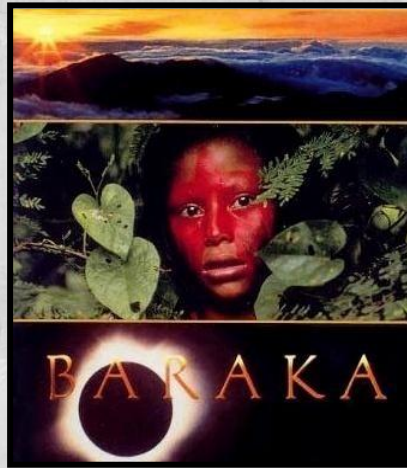
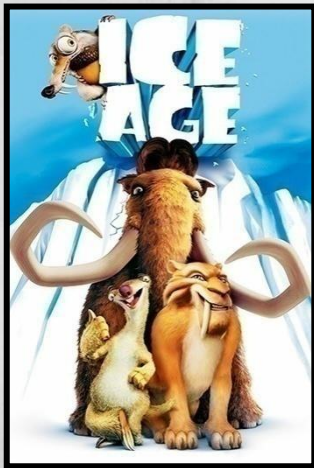
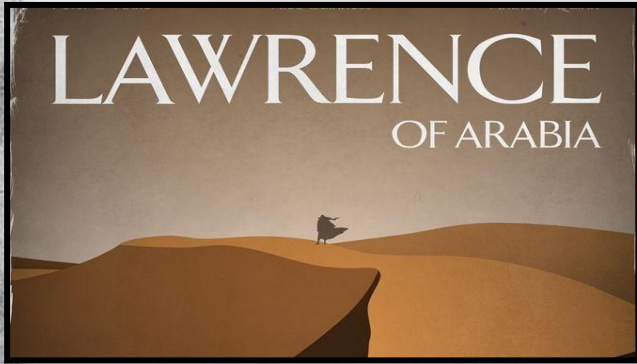


**R.P MISHRA  
(1930-2021)**

**Contribution of R.P Mishra to geography:**

RP Mishra has contributed to regional geography. As per R.P. Mishra, there should be five levels of growth location in larger countries for regional planning. The five levels are:

- Growth poles
- Growth center
- Growth point
- Services Center
- Market village







## WHAT ARE THE CAREER SCOPE OF GEOGRAPHY /WHAT JOBS GEOGRAPHY CAN GET YOU?

When it comes to learning each subject separately, it will be easy but gets tough as we go into the higher levels. However, overall, it is a good learning experience. One such subject is geography, where we learn about the types of landform, physical structure of the earth, space and so on. By learning this course, you can know how much our country has in terms of its resources, landform and geographical location.

You can also learn about the earth and its atmosphere as well as how human being are affecting them. One can also learn about the phenomenon related to the formation of our planet Earth and other planets. When you take up geography as a graduation course, you will be able to know about all these aspects in detail and will also come to learn about disaster management. Among all the other subjects, geography is the easiest subject you can learn and get placed in top positions at the same time.

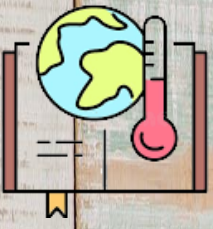
In geography, getting a job after B. A. /B. S. C. is not that often if we want to go for a job of the geography generally. Now if we want to get any job then you can apply for the private companies such as TCS, Cognizant, Accenture etc which offer campus placement for the B. A. /B. S. C. Graduation. Apart from if you wish you can also apply for the government service examination such as UPSC, state civil service, SSC CGL etc.

**There are 4 levels of learning in this course and they are as follows ----**

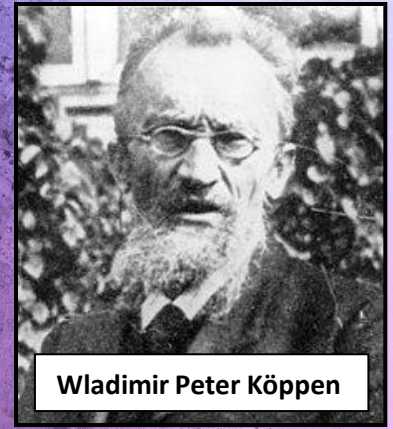
1. Bachelor's in geography /B. S. C. Geography
2. Master's in Geography/M.S.C geography
3. M.Phil in geography
4. Doctorate in geography .

**After completing Bachelor of arts and science in geography you can apply for different job opportunities mentioned below :**

- \*agricultural specialist
- \*remote sensing specialist
- \*climatologist
- \*environment manager
- \*transportation manager
- \*mining supervisor
- \*ISRO      \*NRSC      \*NATMO
- \* Environmental projecting agencies
- \*Government research institution etc.



# KOEPPEN'S CLIMATE CLASSIFICATION



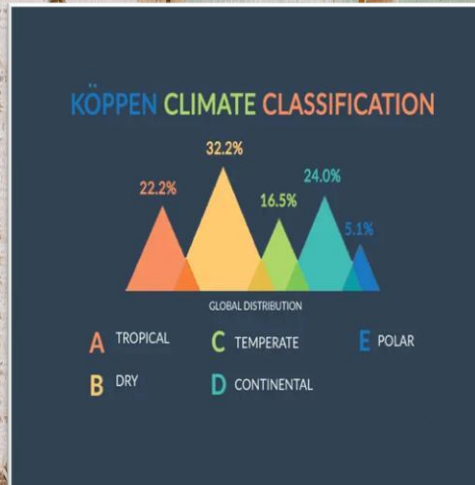
**Wladimir Peter Köppen**

Born: 25 Sept, 1846  
Saint Petersburg, Russian Empire  
Died: 22 JUNE 1940 (aged 93)  
Graz Ostmar, Nazi Germany

**Climatology** is the study of the atmosphere and weather patterns over time. This field of science focuses on recording and analyzing weather patterns throughout the world and understanding the atmospheric conditions that cause them. It includes the study of different kinds of weather that occur at a place.

In the field of climatology the koppen classification is the most widely used classification of climate.

**Wladimir Peter Köppen** Thornthwaite, the most important name in the history of climatology, and the father of modern climatology, is **Wladimir Peter Köppen** (Thornthwaite, 1943). Köppen published his first significant paper in 1868 and was researching, writing and publishing at the time of his death.



**Koppen's Classification of climate** is the most commonly used classification of climate. This climate classification scheme was developed by **Wladimir Peter Koppen** in 1884.

He recognized a close relationship between the distribution of vegetation and climate. The categories are based on the data of annual and monthly averages of temperature and precipitation. He selected specific values of temperature and precipitation and related them to the distribution of vegetation and used these values for classifying the climates.

The Koppen climate classification system recognizes five major climatic types and each type is designated by a capital letter- A, B, C, D, E, and H.

The seasons of dryness are indicated by the small letters: f, m, w, and s.

f -no dry season

m – Monsoon climate

w- Winter dry season

s – Summer dry season

The small letters A, B, C, and refer to the degree of severity of temperature.

**List of climatic groups and their characteristics according to Köppen.**

**A- Tropical** The average temperature of the coldest month is 18° C or higher

**B- Dry Climates** Potential evaporation exceeds precipitation

**C- Warm Temperate** The average temperature of the coldest month of the (Mid-latitude) climates years is higher than minus 3°C but below 18°C

**D- Cold Snow forest** The average temperature of the coldest month is minus 3° C or below

**E- Cold Climates** Cold Climates Average temperature for all months is below 10° C

**H- Highlands** Cold due to elevation

# ANTARCTICA



Antarctica one of the most pristine place on earth, a safe heaven undiscovered and left alone in the past, but in present times, just how unspoiled is this place? Is it safe from man-made problems? Are animals living over there any safer?

The answer is a shocking no .As trips to Antarctica... Both scientific and recreational , increased, then so did a number of problems .In the past one hundred years ,a large number of people have started visiting this once untouched land. While a number of scientific tour are made in hopes of some ground-breaking research, a large number of trips were made to recover large fishing areas The negative effects have started to surface.

All the oceans of the world are already overfished, and there are chances that if technology were to improve, Antarctica may suffer the same fate. An ozone hole has also appeared over Antarctica for over 30 years, due to chemical pollutants and CFC's produced thousands of miles away. Waste is also being generated due to human exploration and exploitation of mineral reserves, oil and gas.plus invasive species are a very concerning matter. Organisms not native are being taken there on ships, attached as seeds to boots or clothing. Rats in particular are a threat to the vulnerable Antarctica nesting birds.

The biggest threat yet, out of all these, is global warming.climate change resulting in warming of sea and loss of sea ice and land-based ice. Already some ice shelves have collapsed and ice slopes and glaciers have retreated.The breeding populations and ranges of penguins have already been altered.

The age old moral question that rises is that why should the regional species.... like whale, penguins, snails, Antarctica huskies suffer due to our unnecessary interference? The rest of the world has already been environmentally tainted,so shouldn't we leave these pure-white ice covered poles Alone, so that at least one part of the earth can remain untouched,in its original glory.





# NALBARI COLLEGE COLLAGE





## IMPORTANCE OF MAPPING IN

## GEOGRAPHY

Mapping is an essential tool in geography, as it enables us to visually represent and analyze spatial relationships and patterns.

Here are some of the key ways in which mapping is important in geography:

**Spatial Analysis:** Mapping allows us to analyze and understand spatial patterns and relationships. This can involve examining things like population density, land use patterns, transportation networks, and natural resources. By mapping these patterns, geographers can identify trends, patterns, and relationships that may not be immediately apparent in other forms of data.

**Navigation:** Maps are also used for navigation and way finding. Whether it's using a map to plan a road trip or hiking in the wilderness, maps are an essential tool for finding our way around.

**Planning:** Maps are used extensively in urban planning, land-use management, and disaster management. Planners and emergency responders use maps to identify areas of risk, plan for resource allocation, and coordinate emergency response efforts.

**Visualization:** Maps are a powerful tool for visualizing data and communicating information. For example, maps can be used to show the distribution of a particular disease outbreak or the distribution of natural resources across a region.

Overall, mapping is an essential tool for geographers, as it enables them to analyze, understand, and communicate spatial patterns and relationships.

The Best Way To  
Predict Your Future  
Is To Create It.

*-Abraham Lincoln*

Geography is the study of the physical features of the earth, including its landforms, natural resources, climate, and population distribution. While it may not seem obvious at first glance, geography plays a crucial role in our daily lives. From the food we eat to the clothes we wear, geography influences many aspects of our lifestyles. In this article, we will explore why geography is important for our daily lives.

## IMPORTANCE OF GEOGRAPHY ON OUR DAILY LIFESTYLE



**1. Understanding the Environment:** Geography helps environment around us. It helps us understand how the weather, climate, and natural resources affect our daily lives.

For example, knowing the geography of an area can help us prepare for natural disasters such as floods, earthquakes, or hurricanes



**2. Food and Agriculture:** Geography plays a significant role in food production and agriculture. Understanding the geography of a region can help farmers determine which crops are best suited for the area, and which ones will yield the most successful harvest. Similarly, geography can help consumers make informed decisions about the types of food they eat, and where it comes from. By understanding the geography of food production, we can make better choices for our health and the environment.



**3. Transportation** : Geography also plays a critical role in transportation

. By understanding the geography of a region, we can plan efficient transportation routes, including roads, railways, and air travel. Geography also helps us understand the impact of transportation on the environment, and how we can mitigate these effects



### 4. Cultural Diversity:

Geography is an essential factor in understanding cultural diversity. Understanding the geography of a region can help us understand the history, traditions, and customs of the people who live there. It can help us appreciate the unique cultural experiences of different regions around the world.



**5 Tourism:** Geography is also important for the tourism industry. By understanding the geography of a region, we can plan travel itineraries that include the most scenic and culturally significant destinations. Geography can help us appreciate the natural beauty of different regions.

Abantika  
Buzar  
Baruah  
6<sup>th</sup> Sem



# Geographical wonders.



90% of Earth's population lives in the Northern Hemisphere.

Continents shift at about the same rate as your fingernails grow.

Mt. Thor on Baffin Island, Canada, has Earth's greatest sheer vertical drop (4,101 feet).

Vatican City is the smallest country in the world.

California has more people than all of Canada.

The Dead Sea is currently 429 meters below sea level and sinking about 1 meter a year.

Australia is wider than the moon.

Russia spans 11 time zones.



In the Philippines, there's an island that's within a lake, on an island that's within a lake, on an island.



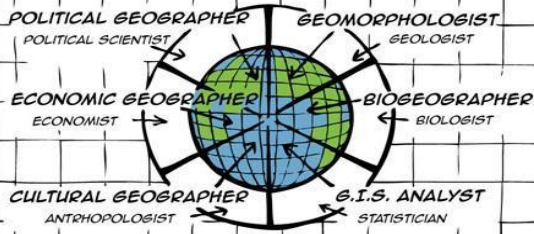
Africa is the only continent that covers four hemispheres.



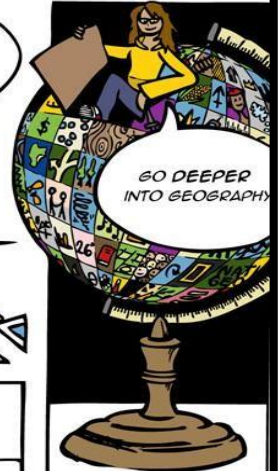
WHAT IS GEOGRAPHY?

**GEOGRAPHY IS SOMETHING YOU DO.**

MORE THAN PHYSICAL, HUMAN, & BIOLOGICAL SYSTEMS, MORE THAN A PERSPECTIVE OR WAY TO LOOK AT THE WORLD, GEOGRAPHY IS SOMETHING YOU DO.



GEOGRAPHERS IDENTIFY RELATIONSHIPS AND EXPLAIN SPATIAL DISTRIBUTIONS.



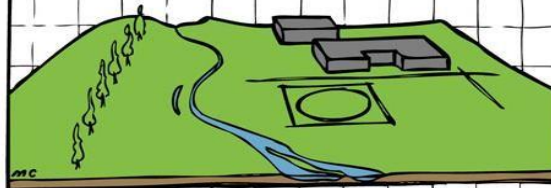
**GEOGRAPHY IS SOMETHING YOU DO, NOT JUST SOMETHING YOU KNOW.**

IT EXPLORES SYSTEMS AND PROCESSES IN THE PHYSICAL, HUMAN, AND BIOLOGICAL WORLD... ALL WHILE USING A GEOGRAPHIC PERSPECTIVE—WHEW!

GEOGRAPHERS ANALYZE PATTERNS & LOCATIONS, SOLVE PROBLEMS, AND MAKE DECISIONS.

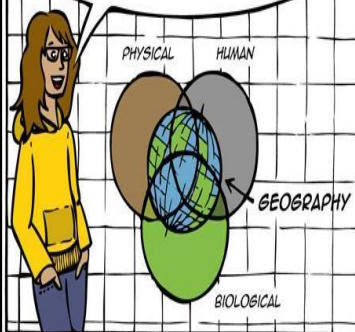


**GEOGRAPHERS PREDICT AND PLAN FOR THE FUTURE.**



**GEOGRAPHY HELPS YOU UNDERSTAND HOW THE WORLD WORKS.**

GEOGRAPHY EXPLORES DIFFERENT SYSTEMS—THE PHYSICAL, THE HUMAN, AND THE BIOLOGICAL—THROUGH SPACE.



FOR EXAMPLE, THE PHYSICAL SYSTEM INCLUDES LANDFORMS, CLIMATE, AND RIVERS;



THE HUMAN SYSTEM INCLUDES CULTURE, MIGRATION, ECONOMICS AND POLITICS;



BUT IT IS SO MUCH MORE!



THE PROBLEM IS THAT MOST PEOPLE THINK THEY ALREADY KNOW ALL OF WHAT GEOGRAPHY IS.

YOU'RE STUDYING GEOGRAPHY? WHAT'S THE CAPITAL OF BURKINA FASO?



AND THE BIOLOGICAL SYSTEM LOOKS AT HABITAT, SPECIES DISPERSAL, & ADAPTATION.



HOWEVER, GEOGRAPHY IS MORE THAN JUST SYSTEMS.



GEOGRAPHY ADDS A SPATIAL PERSPECTIVE.

FOR EXAMPLE, AN ECOLOGIST MIGHT STUDY HOW INDIVIDUAL SPECIES DEPEND ON ONE ANOTHER,

WHILE A BIOGEOGRAPHER MIGHT STUDY HOW THOSE DEPENDENCIES INFLUENCE & ARE INFLUENCED BY LOCATION.

PEOPLE DON'T UNDERSTAND GEOGRAPHY BECAUSE THEY DEFINE GEOGRAPHY TOO NARROWLY.



FACTS ARE IMPORTANT BUT GEOGRAPHY IS SO MUCH MORE... THE POTENTIAL OF GEOGRAPHY IS ENDLESS FOR EXPLORING AND EXPLAINING OUR WORLD.



NOW THE FUN PART—EXPLAINING WHAT GEOGRAPHY AND THE GEOGRAPHIC PERSPECTIVE ARE.



## THE RISE OF VIRTUAL LANDSCAPES AND THEIR IMPACT ON TOURISM

The rise of virtual landscapes, also known as virtual reality (VR) or augmented reality (AR) environments, has had a significant impact on tourism in recent years. Virtual landscapes allow people to explore and experience destinations without leaving their homes, making them a popular choice for travelers who cannot afford to travel or are unable to travel due to various reasons such as the COVID-19 pandemic.

One of the most significant impacts of virtual landscapes on tourism is that they provide an opportunity for people to experience destinations before they visit them. This allows travelers to research and plan their trips more effectively, as they can get a feel for the location and its attractions before they arrive. It can also encourage people to visit places they might not have considered otherwise, as they can see what the location has to offer and determine whether it is a good fit for them.

Virtual landscapes can also be used as a marketing tool for destinations, as they can showcase their attractions and features in a more engaging and interactive way. This can attract more visitors to the location and boost tourism revenue.

Furthermore, virtual landscapes can provide an immersive experience for people who are unable to travel, such as those with disabilities or mobility issues. This allows them to explore new places and enjoy travel experiences that they may not have been able to otherwise.

However, virtual landscapes can also have a negative impact on tourism, as they can discourage people from visiting destinations in person. This could lead to a decrease in tourism revenue for certain locations, as people may opt to experience the destination virtually rather than in person.

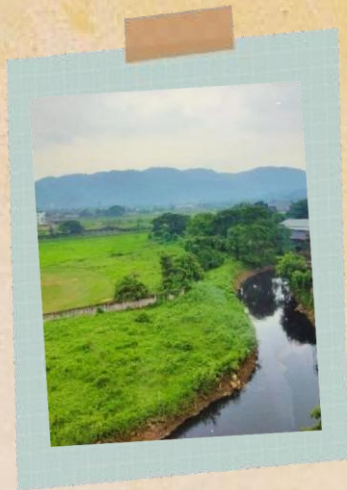
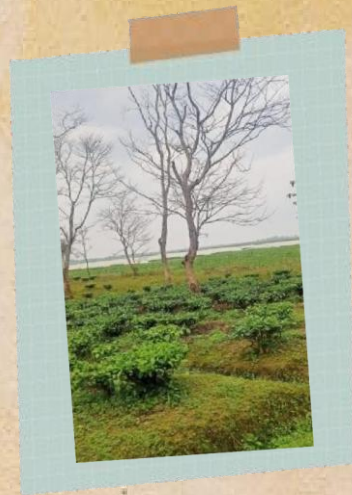
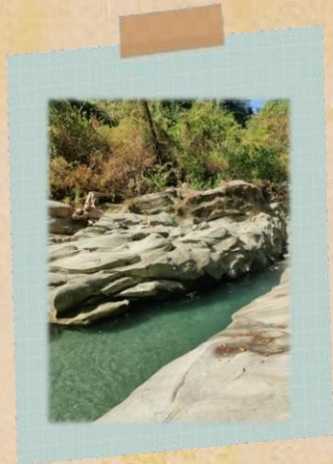
Overall, the rise of virtual landscapes has had a significant impact on tourism, providing new opportunities for travelers to explore and experience destinations in innovative ways.



MONMI SARMA  
6<sup>th</sup> SEM

# PHOTOGRAPHY







वसुधैव कुटुम्बकम्

# THE GROUP OF TWENTY – G20



◦ONE EARTH

◦ONE FAMILY

◦ONE FUTURE

The group of twenty (G20) is the premier intergovernmental forum for international economic cooperation . The forum plays an important role in shaping and strengthening global architecture and governance on all major international economic issues .

India holds the presidency of the G20 from 1 December 2022 to 30 November 2023 . The theme of India’s G20 presidency is – “Vasudhaiva Kutumbakam” or “one earth . One family . One future.”

The group of twenty (G20) comprises 19 countries ( Argentina , Australia , Brazil , Canada , China , France , Germany , India , Indonesia , Italy , Japan , Republic Of Korea , Mexico , Russia , Saudi Arabia , South Africa , Turkey , United Kingdom And United States) and the European union . The G20 members represent around 85% of the global GDP , over 75% of the global trade , and about 2/3 of the world population .

#### The objectives of G20 are :

- I. Policy coordination between its members in order to achieve global economic stability , sustainable growth ;
- II. To promote financial regulations that reduce risks and prevent future financial crises ; and
- III. To create a new international financial architecture .

#### India’s G20 priorities :

- ❖ Green development , climate finance & lifestyle of environment (life)
- ❖ Accelerated , inclusive and resilient growth
- ❖ Accelerating progress on sustainable development goals (sdgs)
- ❖ Technological transformation & digital public infrastructure
- ❖ Multilateral institutions for the 21th century
- ❖ Women – led development

The group doesnot have a permanent secretariat . The presidency is supported by the troika – previous , current and incoming presidency . During india’s presidency , troika will comprise Indonesia , India and brazil respectively .

-AKSHAY Kr. BARUAH  
6<sup>th</sup> Sem



# GEOGRAPHY: MOTHER OF ALL SCIENCE

Geography is an extremely broad field. Because of this, many view the various definitions of geography proposed over the decades as inadequate. To address this, William D. Pattison proposed the concept of the "Four traditions of Geography"

**Earlier**, people thought geography is all about studying places, learning states, capitals, mountains and water bodies. But once you explore the subject you will find geography is all about the study of whole universe which includes the study of Earth's interior up to the space.

Geography is a subset of earth science, one of the natural science along with chemistry, biology etc. Geography is the study of the physical features of the earth and its atmosphere, and of human activity as it affects and is affected by these, including the distribution of populations and resources. Geography can also be defined as the study of spatial relationships between physical features and many concepts can be applied more broadly to other celestial bodies in the field of planetary science. One of such concepts, the first law of geography, proposed by Waldo Tobler, is "everything is related to everything else, but near things are more related than distant things. Geography has been called "the world discipline" and "the bridge between the human and the physical sciences."

- \*The spatial or locational tradition is concerned with employing quantitative methods to describe the spatial characteristics of a location. The spatial tradition seeks to use the spatial characteristics of a location or phenomena to understand and explain it.
- \*The area studies or regional tradition is concerned with the description of the unique characteristics of the earth's surface, resulting in each area from the combination of its complete natural or elements, as of physical and human environment.
- \*The Human Environment relation is concerned with the description of the spatial interactions between humans and the natural world. Since the changing of the human relationship with the environment as a result of globalization and technological change, a new approach was needed to understand the changing and dynamic relationship.
- \*The Earth science tradition is largely concerned with what is generally referred to as physical geography. The tradition focuses on understanding the spatial characteristics of natural phenomena.

The structure of geography has changed literally after the world war II when the geographers of the world demanded the use of statistical analysis in geography which led to quantitative revolution. Apart from all these geography now includes digitization through the study of GIS and remote sensing.

As geography studies every aspect of human life and due to its links and influences on a range of other scientific fields including biology, mathematics, anthropology, geology, astronomy and chemistry, geography can be considered as mother of all science.

THE

SEVEN

THEMES

OF

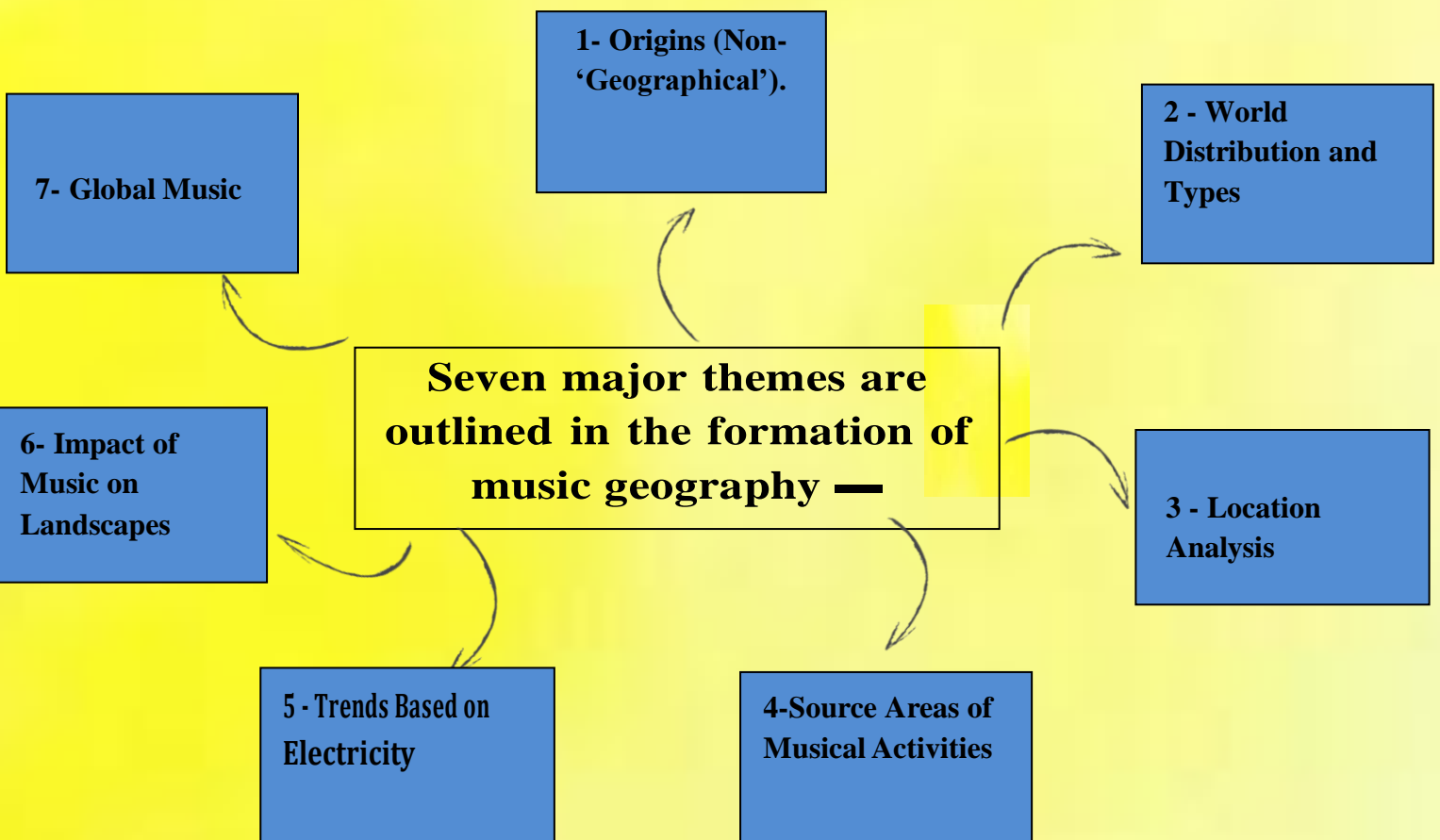
MUSIC

GEOGRAPHY



Music geography is a subfield of cultural geography, to which numerous researchers have made commendable contributions. Nash and Carney (1996) identify seven themes of music geography, including origins of music, world distribution, location analysis, source areas, trends based upon electricity, impact of music on landscapes, and global music. After reviewing studies in these seven areas, the authors suggest an emerging theme of -technological innovations .

Music geography first emerged as a subfield of cultural geography 1970, During the past 25 years, a significant body of research has been published in scholarly journals, books, and reference works .



**If People Are  
Doubting How Far  
You Can Go, Go So  
Far That You Can't  
Hear Them Anymore.**

**-Michele Ruiz**



# Glaciology: The Coolest Science You'll Ever Study



Glaciology, the study of glaciers, ice sheets, and ice caps, has a rich history dating back to the early 18th century. Glaciers cover around 10% of the Earth's land surface, and they play a crucial role in the Earth's climate system. In this article, we will explore the history and importance of glaciology.

## History of Glaciology:

The first recorded observation of a glacier was by the French scientist Louis Agassiz in 1840. He noticed scratches on rocks in the Swiss Alps that could only have been caused by glaciers. He went on to study glaciers and ice sheets in Europe and North America, and his work laid the foundation for modern glaciology.

In the early 20th century, glaciology became a more formalized discipline. The International Glaciological Society was founded in 1936, and glaciology became an established field of study. Since then, advances in technology, including satellite imagery and ice core analysis, have greatly improved our understanding of glaciers and their importance.

## Importance of Glaciology:

Glaciers play a critical role in the Earth's climate system. They reflect sunlight, which helps to cool the Earth's surface. As the climate warms, glaciers are melting at an increasing rate, which has serious consequences for sea level rise, freshwater availability, and natural hazards such as flooding and landslides.

Glaciers also provide valuable information about past climate conditions. Ice cores drilled from glaciers contain layers that can be analyzed to reveal information about temperature, precipitation, and atmospheric composition. This information helps us understand how the Earth's climate has changed in the past and can help us make predictions about future climate change.

Glaciers are also important for the communities that live near them. They are a source of freshwater for drinking, irrigation, and hydropower. In regions where glaciers are melting rapidly, such as the Himalayas and Andes, the loss of glaciers could have a significant impact on the availability of water.



- Glaciers contain about 75% of the world's fresh water.
- The study of glaciers is called glaciology
- The word "glacier" comes from the French word "glace," meaning ice.
- Glaciers can be found on every continent, including **Africa**.

PRANJAL KALITA  
6<sup>th</sup> Sem



## Conclusion:

Glaciology is a fascinating and important field of study that has contributed greatly to our understanding of the Earth's climate system. As the climate continues to warm, the study of glaciers will become even more critical. By studying glaciers, we can better understand the past, present, and future of the Earth's climate and make informed decisions about how to mitigate the effects of climate change.

## DEFINITION AND SCOPE OF CULTURAL AND SOCIAL GEOGRAPHY

There is no standard definition given to culture. But, most generally, Culture is a specialized behavioral patterns, understandings and adaptations that summarize the way of life of a group of people. It is the sum of shared attitudes, customs and beliefs that distinguishes one group of people from another. Culture is viewed as the configuration of institutions and modes of life.

Culture is, therefore, the complex whole which includes knowledge, belief, arts, morals, laws, customs, and any other capabilities and habits acquired by human as member of the society.

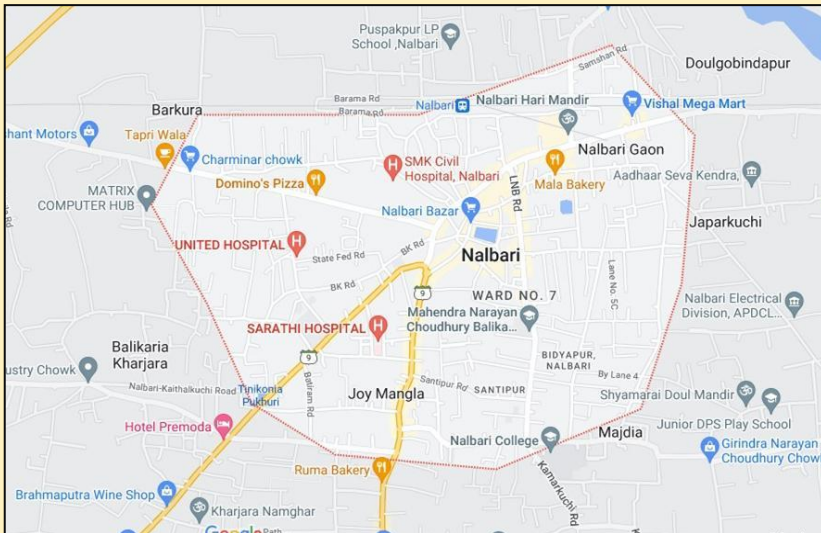
Culture refers to refined music, art, and literature. From wider perspective, culture is learned collective human behaviour, which is socially transmitted such as customs, belief, morals, technology, and art, rather than biologically transmitted. Human learns culture through the process of socialization, enumeration, personal experience and through deliberate indoctrination or teaching. Learning of culture is a lifelong process from birth to death. Cultural elements such as language, religion, ethnicity, race, etc that vary from one culture group to the other. There is a world of cultural differences with respect to religion, technology and medicine, economic and agricultural activity, and modes of architecture and transportation. Cultural communities may differ in their dress, music, food, dance, sport, and other cultural components. Culture is dynamic/changes, but its transformation is gradual, not sudden. Thus, culture is a continuous process of change. Culture continues to give a community a sense of dignity, continuity, security and binds society together. Culture is an invaluable inheritance of uncountable experiences, experiments and endeavors. It is nurtured in the infinite lap of time, age after age. Culture has spatial expression, which is one reason why geographers study it. Cultural and social geography, thus, is the study of spatial variations or cultural diversity among cultural groups and the spatial functioning of society. It focuses on describing; analyzing and Explaining the ways language, religion, ethnicity, economy, government and other cultural components vary or remain constant from one place to another. It, therefore, bridges the social and the earth sciences by seeking an integrative view of humankind in its physical environment. Cultural and social geography is also the study of the impact of human culture on the landscape. Cultural geography key concepts or themes, however, are cultural region, cultural landscape, cultural diffusion, cultural ecology, and cultural interaction/integration with emphasis on language, religion, ethnicity, race, technology and social change. It also treats the origin and evolution of human kind and culture, including agriculture, settlement and human dispersal. And the plant cover of the whole region and even the zone of the river valleys varied markedly from north to south. The estuaries fill of the two rivers has added a significant region to the Southern end of the lowland since Mesopotamia began to be a much sought-after homeland. The physical contrast between North and South reflected in the socio – political history of the two sectors, and a single way of life cannot always be presumed to have been the rule in all localities. The earliest peoples are fully related to modern ethnic divisions of humanity, nor are some of the immigrants clearly identifiable. The region situated at the intersection of perhaps the most frequented crossroads of them all. Its cultural-trading relationships stretch out along the route ways to include the eastern shores of the Mediterranean Sea, the hill country of Asia Minor, the hill margins of Iran, and the littorals of the Persian Gulf. This larger zone is the region termed the Fertile Crescent. By about 3,000 B.C., the Mesopotamia region had become a bright and shining light of culture to an outer world of Barbary. Accessibility of the Mesopotamian region to peoples round about was a two-way proposition. Over the centuries, Mesopotamia received many in-migrating peoples, some of whom came as conquerors, some as settlers seeding a home, some as slaves, and some merely as traders. After about 800 B.C. the rising power of the Assyrian and Persian kings, conquered Mesopold World Culture Hearths.

OUR FOOD, OUR CLOTHES,  
OUR VERY AIR ,  
ALL INFLUENCED BY THE  
WORLD OUT THERE,  
VASTNESS OF GEOGRAPHICAL  
KNOWLEDGE NEVER ENDING,  
ITS IMPACT ON US ALWAYS  
EXTENDING

*FROM EDITOR'S TEAM*



# GEOGRAPHY OF NALBARI:



**Nalbari district of Assam is located on northern part of the mighty Brahmaputra river and bounded by North latitude 26008'30" and 26034'20" E longitudes 91014'30" and 91038'10" covering area of 2,257 sq .km .**

**As per 2001 census ,the total population of the district is 6,89,053.The land use data reveals that the district has total forest land of 17003 ha. The net area sown is 1,53,545 ha and current fallow is 945 ha .The district has total cropped area of 2,11,064 ha and total cultivable Area of the district is 1,54,652 ha .**

**The district receives moderate during April to July with an average rainfall of 1904.4 mm. The district experiences highest temperature of 35 degree Celsius in summer and mean minimum temperature up to 11 degree Celsius .The relative humidity varies from 74 to 85.during Monson period.**

**Geologically ,the district is younger alluvium on north and flood plains deposited on southern reach near the Brahmaputra river .The alluvium comprises thick beds of clay. The flood plain is deposit characterized by fine to very fine grand silty sand and loose Clay bands.**

**The Brahmaputra along with its tributaries like Pagladiya, Buradiya,Baralia etc control the main drainage system of the district. Physiology call, the district can be divided into two units**

- ( 1) Northern alluvial region (between 120-140 amsl )**
- (2) The southern swamps or flood plain of River Brahmaputra**

**Ground Water occurs under unconfined condition in the district and being a mono aquifer system ,the water level almost directly related to the amount of precipitation received. The pre- Monsoon average water level is 1.24 m bgl ,which the post monsoon value is 1.61 m bgl. The long water level trend does not show any significant change.**





## FIELD STUDY AS AN IMPORTANT PART OF GEOGRAPHY

In general sense Field study refers to the learning acquired through the observation of natural environment away from the classroom that provide a comparative analysis of knowledge of the natural world and knowledge acquired from the textbooks in the classroom.

The main motive of field study is the acquisition of primary knowledge in the natural environment which in many cases is not possible to obtain from secondary sources. If we took the history and evolution of geography it is noticeable that all the greek , roman ,Arabian European geographers practicing the field study in different regions of the world and determined various new information and characteristics of those regions. The adventures and explorations of Alexander Von Humboldt , karl ritter , vasco da gama , marco polo , Christopher Columbus; the various observation and concepts regarding solar system by Eratosthenes, Homer, Anaximander, Brahmagupta,

etc had given a new direction to the subject geography. Specially the expedition of Alexander – von- Humboldt to south America (exploration of new knowledge regarding Valencia lake, Orinoco river and its connection with the Amazon river , measurement of cold water currents of Peru), North America (impact of landforms on the cultural landscape), Russia (by observing coastal landscape of the Caspian sea and expedition in the Siberian region, gave the concept regarding variation of temperature on the same latitude moving inward from the coast )etc enriched the geographical knowledge.

From my personal experiences, I feel that field survey helps to know the real world by developing intellectual and mental ability of students as well as to increase their self-confidence and analytical skills. Recently, I visited the Sivasagar district of Assam , which is rich in ancient Ahom history. Though, I have been reading about the monuments including Rang ghar ,Kareng ghar , Talatal ghar etc of this region since childhood, but by visiting the place I also learned many new information regarding the condition of the developing tourism industry based on the monuments, the socio-economic lifestyle of the residents, businesses, transport & communication system , religious vows, the future possibilities etc and the natural beauty of this region still haunts the mind.

**PUBALI DEKA, EX-STUDENT  
GEOGRAPHY DEPARTMENT (2019-2022)**

**“EVERYTHING HAS TO  
DO WITH  
GEOGRAPHY”**

**~JUDY MARTZ**

# The Northern Light



The Northern Lights, also known as Aurora Borealis, are a natural phenomenon that occurs in the polar regions of the Earth. They are caused by electrically charged particles from the sun colliding with the Earth's atmosphere, creating colorful displays of light in the sky.



Italian astronomer Galileo Galilei who coined the name "aurora borealis" in 1619 — after the Roman goddess of dawn, Aurora, and the Greek god of the north wind, Boreas — the earliest suspected record of the northern lights is in a 30,000-year-old cave painting in France.

At any given moment, the sun is ejecting charged particles from its corona, or upper atmosphere, creating what's called the solar wind. When that wind slams into Earth's ionosphere, or upper atmosphere, the aurora is born. In the Northern Hemisphere, the phenomenon is called the northern lights (aurora borealis), while in the Southern Hemisphere; it's called the southern lights (aurora australis).

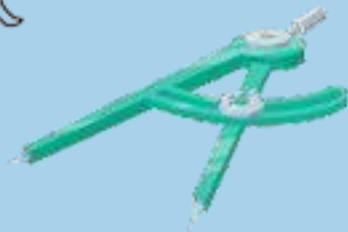
The colors of the Northern Lights are typically green, pink, and purple, but can also appear in shades of red, yellow, and blue. The intensity and frequency of the Northern Lights depend on the sun's activity, with more frequent and intense displays occurring during periods of high solar activity.

The best time to see the Northern Lights is during the winter months, when the nights are long and dark. However, they are not always visible, and the intensity and frequency of the lights can vary depending on solar activity and other atmospheric conditions. The northern regions have lengthy periods of darkness during the winter, which makes it easier to see the Northern Lights. The Polar Regions have nearly nonstop daylight in the summer, making it challenging to observe them.

Many people travel to see the Northern Lights, as they are considered one of the most beautiful natural phenomena in the world.



**Darkness  
compounds the  
beauty of light.**



Designed by -

*Jitu , Nabadeep , Dipankar*