GEOGRAPHICAL SELECTIONS

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Chapter 1

What Is Geography?

Geography is the study of the Earth's physical features and environment including the impact of human activity on these factors and vice versa. The subject also encompasses the study of patterns of human population distribution, land ”use, resource availability, and industries

Scholars who study geography are known as geographers. These people engage themselves in the exciting task of exploring and studying the Earth's natural environment and human society. Although map-makers were known as geographers in the ancient world, today, they are more specifically known as cartographers. Geographers usually focus on two major fields of geographical studies: physical .geography or human geography

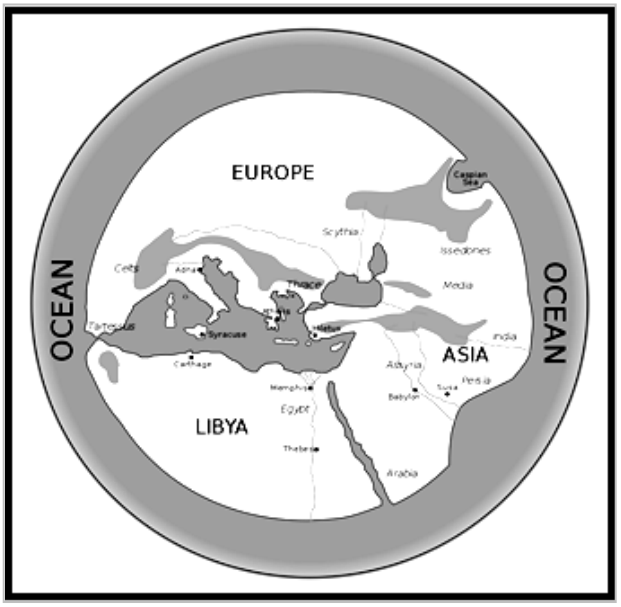
History of Geography:

The term geography was coined by the ancient Greeks who not only created detailed maps and accounts of places around them but also illuminated why and how human and natural patterns varied from one place to another on Earth.

Through the passage of time, the rich legacy of geography made a momentous journey to the bright Islamic minds.

The Islamic Golden Age witnessed astounding

van cements in the geographical sciences. Islamic geographers were credited with groundbreaking discoveries.



(Reconstruction of the map of Hecataeus of Miletus)

New lands were explored and the world's first grid-based mapping system was developed.

The Chinese civilization also contributed instrumentally towards the development of early geography. The compass, a traveling aid, devised by the Chinese, was used by the Chinese explorers to explore the unknown

A new historical chapter of geography opened during the "Age of Discovery", a period coinciding with the European

Renaissance. A fresh interest in geography was regenerated in the European world.

Marco Polo, the Venetian merchant traveler, spearheaded this new Age of Exploration Commercial interests in establishing trade contacts with the rich civilizations of Asia like China and India became the primary reason for traveling during this period.

Europeans moved ahead in all directions, discovering new lands, unique cultures, and natural wonders in the process. They also began to colonize new lands towards the latter half of the Age of Exploration.

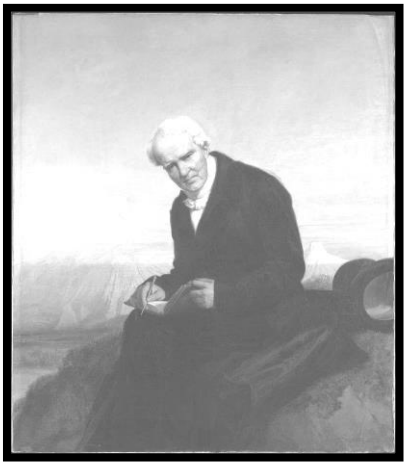
The tremendous potential of geography to shape the future of human civilization was recognized and in the 18th Century, geography was introduced as a discipline of study at the university level.

Based on geographical knowledge, the human society discovered new ways and means to overcome the challenges posed by nature and human civilizations flourished in all parts of the world. In the 20th century, aerial photography, satellite technology, computerized systems, and sophisticated software radically changed the definition of geography and made the study of geography more comprehensive and detailed

The Branches of Geography:

Geography can be regarded as an interdisciplinary science. The subject encompasses an interdisciplinary perspective that allows the observation and analysis of

(Alexander von Humboldt)) (1769 – 1859)



anything distributed in Earth space and the development of solutions to problems based on such analysis.

The discipline of geography can be divided into several branches of study. The primary classification of geography divides the approach to the subject into the two broad categories of physical geography and human geography

Human Geography:

Human geography is the branch of geography that deals with the study of how the human society is influenced by the Earth's surface and environment and how, in turn, anthropological activities impact the planet.

Human geography is centered on the study of the planet's most evolved creatures: the humans and their environment

This branch of geography can be further subdivided into various disciplines based on the focus of study

Population Geography:

A division of human geography, population geography deals with the study of how the nature of a place determines the distribution, growth, composition, and migration of human populations

Historical Geography:

Historical geography elucidates the ways in which geographical phenomena change and evolve with time. Though it is treated as a sub-field of human geography, it also focuses on certain aspects of physical geography. Historical geography attempts to understand why, how and when a place or region on Earth changes and the impact such changes have on the human society

Cultural Geography:

Cultural geography explores how and why cultural products and norms vary with space and place. It thus deals with the study of the spatial variations of human cultures including religion, language, livelihood choices, politics, etc. Religion geography, language geography, etc., are some of the subfields of cultural geography

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Economic Geography:

A vital aspect of human geography, economic geography encompasses the study of how human economic activities are located, distributed and organized in geographical place and space. Marketing and transportation geography can be treated as sub-fields of economic geography

Political Geography:

This important field of human geography deals with the political boundaries of the countries of the world and the division of land and its resources between the countries. It also deals with how spatial structures influence political functions and vice versa. Military geography, electoral geography, geopolitics are some of the subfields of political geography

Health Geography:

A sub-discipline of human geography, health geography concentrates on the influence of the geographical location and place on the health and well-being of humans. It tends to approach the subject of human health from a comprehensive perspective encompassing the influence of society and space on health and disease

- **Medical Geography:**

Medical Geography does not have particularly strong links with 'medicine', as normally understood (i.e. the

treatment of people who are ill) so many medical geographers now prefer to refer to their subject as the Geography of Health and Health Care' and to themselves as 'health geographers'. However, I am not convinced that such formulations represent an improvement.

Developmental Geography:

This branch of human geography explores the quality of life and the standard of living of the human inhabitants of the world and attempts to

Settlement Geography:

Settlement geography attempts to explore the part of the Earth's surface that encompasses human settlements. It is a study of the urban and rural settlements, the economic structure, infrastructure, etc., and the dynamics of human settlement patterns in relation to space and time

Animal Geography:

Animal geography might be considered as a sub-field of human geography which is closely related to the environmental geography branch of physical geography. It encompasses the study of the life worlds of the animals on Earth and the interdependencies between humans and other animals.

understand how and why such standards vary with place and space

Geography of Travel & Tourism:

A term to cover travel to places away from one's home environment undertaken principally for leisure but also for business.

Tourist activities generally involve spending money in a new location and do not involve remuneration from within the place or country visited. Definitions of tourism by international organizations such as the World Tourist Organization recognize anyone who spends at least one night but no longer than one year somewhere other than their country of residence as a tourist.

Physical Geography:

Physical geography is defined as the branch of geography that encompasses the study of the natural features and phenomena (or processes) on the Earth

Physical geography may be further subdivided into various :branches

Geomorphology:

This involves the study of the topographic and bathymetric features on Earth. The science helps to elucidate various aspects related to the landforms on the Earth such as their history and dynamics. Geomorphology also attempts to predict the future changes in the Earth's physical features

Glaciology:

This field of physical geography deals with the study of the inter-dynamics of glaciers and their effects on the planet's environment. Thus, glaciology involves the study of the cry sphere including the alpine glaciers and the continental glaciers. Glacial geology, snow hydrology, etc., are some of the sub-fields of glaciological studies

Oceanography:

Since oceans hold 96.5% of the Earth's waters, a special field of oceanography needs to be dedicated to the study of oceans. The science of oceanography includes geological oceanography (study of the geological aspects of the ocean floor, its mountains, volcanoes, etc.), biological oceanography (study of the marine life and ocean ecosystems), chemical oceanography (study of the chemical composition of the marine waters and their effects on marine life forms), physical oceanography (study of the oceanic movements like the waves, currents, etc

Hydrology:

This is another vital aspect of physical geography. Hydrology deals with the study of the properties of the Earth's water resources and the movement dynamics of water in relation to land. The field encompasses the study

of the rivers, lakes, glaciers, and underground aquifers on the planet.

It studies the continuous movement of water from one source to another on, above, and below the Earth's surface, in the form of the hydrological cycle

Pedology:

A branch of soil science, pedology involves the study of the different soil types in their natural environment on the surface of the Earth. This field of study helps gather information and knowledge on the process of soil formation (pedogenesis), soil constitution, soil texture, classification, etc.

Biogeography:

An indispensable field of physical geography, biogeography is the study of how species on Earth are dispersed in geographic space. It also deals with the distribution of species over geological time periods. Each geographical area has its own unique ecosystem and biogeography explores and explains such ecosystems in relation to physical geographical features. Different branches of biogeography exist like zoogeography (geographic distribution of animals), phytogeography (geographic distribution of plants), insular biogeography (the study of factors influencing isolated ecosystems), etc.

Paleogeography:

This branch of physical geography examines the geographical features at various time points in the Earth's geological history. It helps the geographers to attain knowledge about the continental positions and plate tectonics determined by studying paleomagnetism and fossil records

Climatology:

The scientific study of climate, climatology is a crucial field of geographical studies in today's world. It examines all aspects related to the micro or local climates of places and also the macro or global climate. It also involves an examination of the impact of human society on climate and vice versa

Meteorology:

This field of physical geography is concerned with the study of the weather patterns of a place and the atmospheric processes and phenomena that influence the weather

Environmental Geography:

Also known as integrative geography, this field of physical geography explores the interactions between humans (individuals or society) and their natural environment from the spatial point of view. Environmental geography is thus the bridging gap between human geography and physical

geography and can be treated as an amalgamation of multiple fields of physical geography and human geography

Coastal geography:

specialization of physical geography that also involves a study of human geography.

It deals with the study of the dynamic interface between the coastal land and the sea. The physical processes that shape the coastal landscape and the influence of the sea in triggering landscape modifications is incorporated in the study of coastal geography.

The study also involves an understanding of the ways the human inhabitants of coastal areas influence the coastal landforms and ecosystems

Quaternary science:

This is a highly specialized field of physical geography that deals with the study of the Quaternary period on Earth (the Earth's geographical history encompassing the last 2.6 million years).

It allows the geographers to learn about the environmental changes undergone in the planet's recent past. This knowledge is then used as a tool to predict future changes in the Earth's environment

Geomatics:

Geomatics is a technical branch of physical geography that involves the collection of data related to the earth's surface, analysis of the data, its interpretation, and storage.

Geodesy, remote sensing, and geographical information science are the three sub-divisions of geomatics

Landscape ecology: The science of landscape ecology deals with the study of how the varying landscapes on Earth influences the ecological processes and ecosystems on the planet. The German geographer Carl Troll is .credited as the founder of this field of physical geography

Integrated geography:

Integrated geography is the branch of geography that describes the spatial aspects of interactions between humans and the natural world.

It requires an understanding of the traditional aspects of physical and human geography, as well as the ways in which human societies conceptualize the environment.

Integrated geography has emerged as a bridge between human and physical geography as a result of the increasing specialization of the two sub-fields.

Furthermore, as human relationship with the environment has changed as a result of globalization and technological

change a new approach was needed to understand the changing and dynamic relationship.

Examples of areas of research in environmental geography include emergency management, environmental management, sustainability, and political ecology.

Chapter 2

Human Geography

Human Geography: is the branch of geography that deals with the study of how the human society is influenced by the Earth's surface and environment and how, in turn, anthropological activities impact the planet. Human geography is centered on the study of the planet's most evolved creatures: the humans and their environment

Human Geography**:** focuses on spaces and places. This encompasses spatial structures and patterns of social interaction, as visible in the architectural structures of cities or in the spatial organization of economic areas. But it also includes spaces in our minds, geographical imaginations and the symbolic character of places. The interactions between regions (e.g. the worldwide economic networks, the global networks of knowledge etc.) as well as the interdependencies between different spatial levels (global – national – regional – local) are particularly relevant for

geographers. Human Geography is the science of the spatial organization of human action and the relationships between society and environment.

This branch of geography can be further subdivided into various disciplines based on the focus of study

Chapter 3

Historical Geography

Historical Geography is the branch of geography that studies the ways in which geographic phenomena have changed over time. It is a

synthesizing discipline which shares both topical and methodological similarities with history, anthropology, ecology, geology, environmental studies, literary studies, and other fields.

Although the majority of work in historical geography is considered human geography, the field also encompasses studies of geographic change which are not primarily anthropogenic. Historical geography is often a major component of school and university curricula in geography and social studies. Current research in historical geography is being performed by scholars in more than forty countries

Historical geography, geographic study of a place or region at a specific time or period in the past, or the study of geographic change in a place or region over a period of time. The writings of Herodotus in the 5th century BCE,

particularly his discussion of how the Nile River delta formed, probably provide the earliest example of what would be called historical geography today. Historical geography, as the study of past geographies, remained a relatively undeveloped field of study until the 17th century, when Philipp Culver,

considered the founder of historical geography, published a historical geography of Germany, combining knowledge of the classics with knowledge of the land

In the 19th century the importance of geography as the basis for understanding history was taught in many universities, particularly in Great Britain. Geography as the basis for understanding history changed to the geographic influence upon historical events in the early 20th century. The work of Ellen Churchill Sample used this environmental deterministic interpretation of history.

From the 1930s, historical geography gained prominence through the valuable studies in sequent occupancy—i.e., the study of the human occupation of a specific region

over intervals of historic time—initiated by Derwent S. Whittlesey and Carl O. Sauer. The establishment of the Journal of Historical Geography (1975) and historical-geography research groups by the Institute of British Geographers (1973) and the Association of American Geographers (1979) served to vindicate the historical approach in geography.

has retained its identity and distinction, although historical geographers have not distanced themselves from changes elsewhere in the discipline, with which their focus on interpreting the past from available evidence resonates. The developments in locational analysis stimulated some new ways to study available data.

For others, the later developments, especially in cultural geography, coincided with their deployment of a wide range of nonquantitative sources to reconstruct the real and imagined, as well as the abstract (spatial analysis), worlds of the past; issues of post colonialism have attracted the attention of historical geographers as well as those interested in current cultural issues. Detailed

analyses of particular places and times are complemented by major syntheses—such as Donald Meaning's four-volume The Shaping of America: A Geographical Perspective on 500 Years of History (1986–2002)

A great range of sources is now used in such endeavors, not only maps but also, for example, travelers' writings about worlds they have encountered. Within this enterprise is a rejuvenated interest in the history of geography itself, not merely as a means of better appreciating where the discipline has come from but also of illustrating the importance of place and context in its evolution; geography, like so much else, is a range of practices that emerged and evolved in response to local stimuli. Geographers have produced particular forms of knowledge that have been significantly influenced by how people have encountered the world.

Chapter 4

Population Geography

The geographical study of population, including its spatial distribution, dynamics, and movement. As a sub discipline, it has taken at least three distinct but related forms, the most recent of which appears increasingly integrated with human geography in general.

The earliest and most enduring form of population geography emerged from the 1950s onwards, as part of spatial science.

Pioneered by Glenn Trewartha, Wilbur Zelinsky, William A. V. Clark, and others in the USA, as well as Jacqueline Beujeau-Garnier and Pierre George in France, it focused on the systematic study of the distribution of population as a whole and the spatial variation in population characteristics such as fertility and mortality.

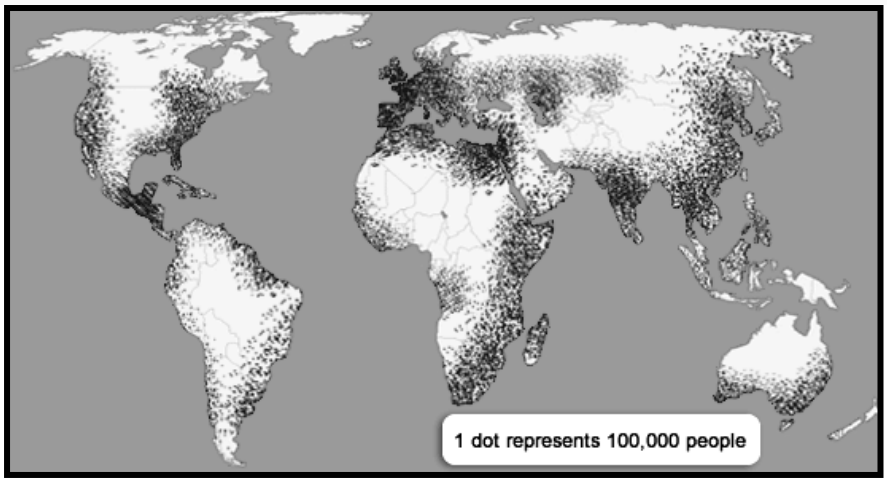
Given the rapidly growing global population as well as the baby boom in affluent countries such as the USA, these geographers studied the relation between demographic growth and resources at an international scale, and population redistribution nationally (see demographic transition).

An exemplary contribution might be Zelinksy's mobility transition model (1971) linking migration and demographic change.

They used secondary data sources such as censuses to map and describe population change and variation, including such trends as counter-urbanization.

Such work could often be distinguished from population studies in general by its use of smaller scale data, below national level. Population projections at national and regional scales could be used to inform public policy debates on resource allocation.

The increasing availability of more sophisticated spatial data, including more flexible census geographies, inter-censual surveys, and more detailed cross-tabulations such as the US Public-Use Micro data Samples encouraged



more advanced modeling, simulation, and projection techniques.

This broad population geography has always been international and therefore comparative in scope, particularly under the auspices of the IGU Commission on Population Geography.

To some extent, however, progress in the Global South has been held back by the poor availability of high-quality spatial data (Hugo 2006). Regular international conferences in population geography began in 2002

A second variant of population geography is narrower in focus, akin to spatial demography.

Geographers working in this field stressed the importance of keeping close to demography, its theories and methods, and therefore concentrating more on the core demographic variables of fertility, mortality, and, to a lesser extent, migration.

They applied mathematical techniques to describe, infer, and also explain population patterns past and present.

A volume edited by British geographers Bob Woods and Phil Rees (1986) Population Structures and Models:

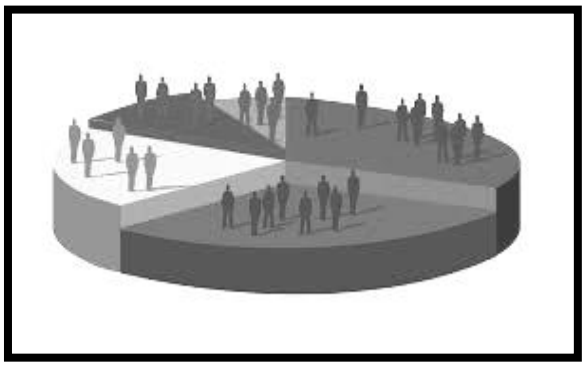
Developments in spatial demography typifies this approach.

Woods' own specialism was the historical demography of infant mortality in Victorian Britain.

Spatial demography has a strong historical component, not least among French and British geographers.

By detailing the spatial (and temporal) variation in mortality, fertility, nuptiality, etc., geographers were able to disrupt many of the generalizations of population change and identify the significance of place.

Many population geographers from the 1980s onwards expressed anxiety that they were marginalized from mainstream human geography and its embrace of social theories from Marxism



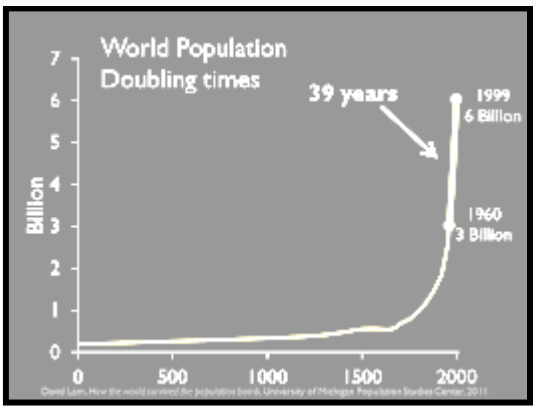
to feminism, and postmodernism (Findlay and Graham 1991).

Not enough research was being done on key issues such as famine, gender, and environment. They also sensed

that other human geographers were overlooking the significance of population to wider processes

A ‘retheorization’ of population geography (White and Jackson) gradually took shape, involving more methodological diversity and theoretical plurality.

New methods, such as life course analysis, helped integrate biographical and individual-level studies into the field. In recent years there has been greater attention paid to gender, religion, age, disability, generation, sexuality, and race, variables which go beyond the vital statistics of births, deaths, and marriages.



Furthermore, population geographers have begun to critique the standard census categories of the field, recognizing the social construction of childhood, whiteness, femininity, etc.

Representative of this more theoretical approach is James Tyner’s (2009) War, Violence and Population: making the body count. Tyner argues that population geography should pay more attention to war and violence, using

examples from the Vietnam War, Cambodia's killing fields, and the Rwandan genocide.

Grounded in post-colonialism and post-structuralism, he deploys Foucault's concepts of biopower and disciplinary power to uncover the logics behind such violence

This more recent form of population geography is increasingly aligned with human geography as a whole. One consequence has been the relative neglect of studies of fertility, mortality, and morbidity, the latter becoming the preserve of medical geography.

Of the core demographic topics, migration continued to be the most central to population geographers; most of the papers in the main population geography journals, Population, Space and Place (launched in 1995 as The International Journal of Population Geography) and Space, Populations, Société's (founded 1983), concern migration and related topics such as transnationalism

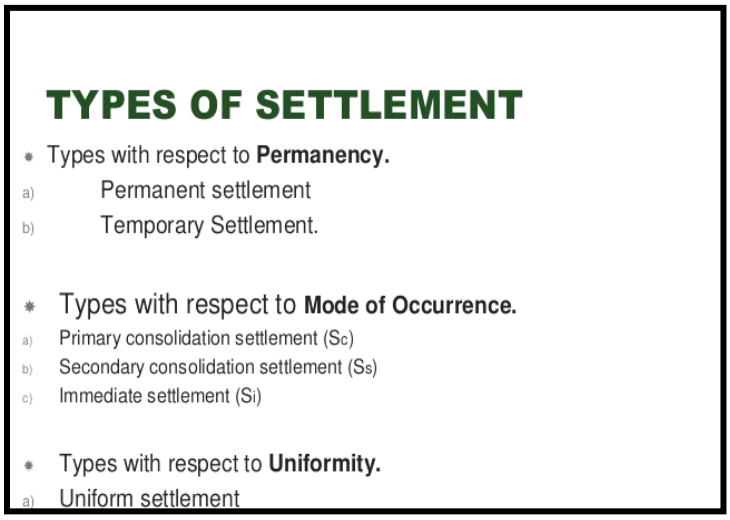
All three forms of population geography outlined here continue side by side. Spatial and historical demography is making increasing use of data sources from outside Europe. Popular textbooks such as Population Geography: Problems, Concept and Prospects (Peters and Larkin 2010) teach new generations the basics of the subject.

By contrast, Adrian Bailey's (2005) Making Population Geography presents a broader, more theoretically informed perspective. Recent conferences and journal special issues have focused on climate change, Neo-Malthusianism, children's geographies, vulnerability, and difference, although migration continues to predominate.

Chapter 5

Geography of Settlements

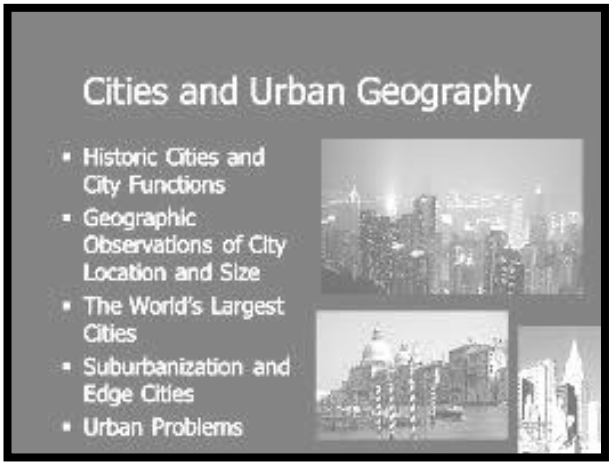
A settlement is a place where people live. They are all different sizes :hamlets are tiny settlements - they are just a collection of houses, perhaps centered around a few farms and maybe without even a shop ;villages are small settlements - several hundred people live in them and they have: a few shops, a place of worship and maybe a school too ;towns are medium-sized settlements - thousands of people live in them and they have a shopping Centre and factories cities are large settlements - they usually have lots of amenities and sometimes a cathedral too (megacities have over 10 million people living in them) Inner Manchester



Rural areas are places in the countryside with few buildings; urban areas are settlements with lots of buildings in them

Transport links, services and entertainment facilities are better in urban areas because more people live in them Different settlements are important for different things and each has a special function

a holiday resort has lots of attractions and shops for tourists to visit and relax in Blackpoll tower from central pier Ferris wheel a market town has a regular market for local farmers a port has a harbor for ships to dock at to collect and deliver cargo to sell their produce at an industrial town has lots of factories and businesses in it Urban Geography



The study of cities and city life from a geographical perspective (see city). Although urban geography is one of the most popular and productive parts of human geography, a precise delineation of the field is understandably difficult.

Attempts to find the essential characteristics of urban places or urban life, for example, by contrast with the rural and rural life, have proved inconclusive (see rurality; urbanism). In much of the world, the distinction between urban and non-urban is blurred or meaningless, as those characteristics once associated with cities such as waged labor, electricity, or the preponderance of secondary relations (i.e. with strangers) become more widespread. In one sense, therefore, the vast majority of human geographical work may be described as urban by default. Considering urban settlements in historical perspective also complicates the search for essential urban qualities. Furthermore, the geographical study of urban life is informed by and contributes to studies in allied disciplines; one of the main journals in the field is simply called Urban Studies. A final complication is that the city as a spatial form can be regarded as both the cause and the consequence of social relations.

From one perspective, exemplified by the Chicago School of urban ecology, cities shaped social effects among their inhabitants. By contrast, many Marxist-inspired geographers in the 1970s thought of cities as the projection of less visible economic processes; inquiry should focus on the processes rather than the outcome. In this regard, David Harvey's contributions have been critical in pointing a way forward.

Despite some ambivalence about the term 'urban geography', over the past sixty years urban geographers have developed some distinct and ongoing themes (Hall and Barrett 2012). Perhaps the most important has been the study of the internal social and spatial structure of cities, in part inspired by ideas from the Chicago School.

Urban morphology considers the spatial layout and appearance of cities in different historical and national

contexts. It can be extended by typologies of different kinds of urban area, for example, edge city, exurb, or suburb. Most focus has been on the social differentiation of urban areas by class, age, race, gender, and sexuality, as well as its causes and consequences (see community; gentrification; segregation; social area analysis; social geography). A second long-standing theme considers cities as systems or networks, linked by flows of people, goods, money, and information (see Central Place Theory; urban system; World City Network).

The third area of inquiry has considered the diversity of cities in historical and international contexts, again frequently through typologies (see industrial city; pre-industrial city; post-industrial city). Here, an important development in the past two decades has been the recognition that normative models or ideas derived from a narrow set of mainly Western cities are not universal region).

Chapter 6

Economic Geography

A sub discipline of geography that seeks to describe and explain the absolute and relative location of economic activities, and the flows of information, raw materials, goods, and people that connect otherwise separate local, regional, and national economies.

It originated in the late 19th century but, unlike its academic cousin, economics, did not initially favor theory. In the form of commercial geography, it tended to be highly empirical, attending to the relations between a location's natural and human resource base and the character of its economy.

The geography of the production of specific commodities was thus based on observation, not deductions from first economic principles. However, this changed from the mid-1950s. Economic geography was, along with urban geography, at the leading edge of the Quantitative and Scientific Revolution in Anglophone human geography. Partly inspired by the earlier research of Alfred Weber and Walter Christaller, a new generation of economic geographers began to look for consistent patterns in the economic landscape that could be explained with reference to producers acting rationally on the basis of their existing resources, the location of their markets, the

transportation costs of moving inputs and finished goods, and so on.

Location theory in various forms became a major preoccupation, with economic geographers gathering and analyzing quantitative data about all manner of commodity producers in order to identity spatial regularities and departures therefrom.

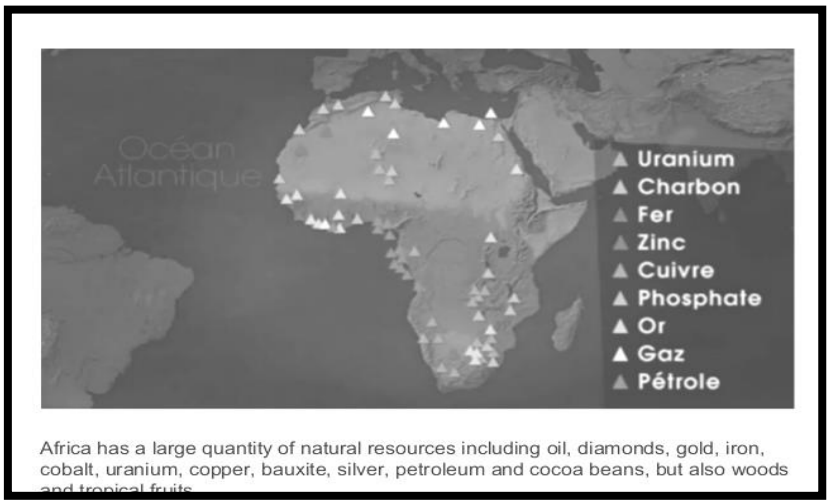
There was an emphasis on describing and seeking to explain spatial decision-making by firms, commuters, labor migrants, and so on. This approach bled into what was called '*regional science', which was linked to government planning and problem-solving.

However, from the early 1970s a new generation of economic geographers began to question quantitative economic geography. As part of the radical geography movement inspired by the worldwide political protests of 1968, these geographers offered four criticisms of the research pursued by an older generation.

First, it was accused of a naive objectivism, or belief that the 'facts' could provide a value-free, unbiased test of a theory. Second, it was criticized for its theoretical assumptions, notably the assumption that economic

actors are governed by a universal form of reason (homo economics).

Third, it was accused of focusing on phenomenal forms not underlying economic processes. Fourth, it was criticized for treating the world's economic geography as if it should (or would) display a spatial order, such that place and regional differences were mere 'noise' to be filtered out in



Africa has a large quantity of natural resources including oil, diamonds, gold, iron, cobalt, uranium, copper, bauxite, silver, petroleum and cocoa beans, but also woods and tropical fruits

the search for general patterns

Out of these criticisms emerged a new kind of economic geography indebted to political economy, especially Marxism.

This research focused on how economic actors had their spatial decision-making structured by the logics of capitalism, a historically specific system that created its own signature geographies. According to David Harvey in

The Limits to Capital (1982), capitalism rests on a geographical tension between fixity and motion, concentration and dispersal, producing inter-place competition and the compulsion for firms and investors to seek out new opportunities in other regions. Like his spatial science predecessors, Harvey believed economic activity had a certain spatial order to it, but unlike them, saw this order as fluid and unstable

Political economic geographers like Harvey saw spatial decision-making by economic actors as structured by definite 'rules' and pressures specific to capitalism, and they also saw economic decision-making as not purely 'rational', but the result of a combination of imperfect reasoning, guess work, and other distinctively human characteristics.

They also focused on large firms in order to highlight their considerable importance for jobs, income, taxation, and wider local and national economies. Doreen Massey's Spatial Divisions of Labor (1984) and Peter Dicken's Global Shift (1986) were two important contributions here during the 1980s. Dicken's book was among several works that analyzed the decline of old industrial regions in North America and Europe and the rise of 'newly industrializing

economies' in the Far East and elsewhere. Much of this work was inspired by the neo-Marxist Regulation Theory of political economy. Aside from examining firm behavior within a wider capitalist context, there were also important early attempts to understand the geographical concentrations and flows of money, notably loans by Western banks to developing countries that ended with a debt crisis by the mid-1980s. Stuart Corbridge's Debt and Development (1993) is an exemplar of this work. Still other political economic research analyzed the connections between national states and economic activity, with a particular focus on the attempt of hegemonic countries to maintain their relative economic prowess.

John Agnew and Stuart Corbridge's Mastering Space (1995) is an exemplar of this attempt to link economic and political geography together. Agnew has gone on to explore the economic underpinnings of America's waning political hegemony (in Hegemony 2005.(

Much of this research was theoretically innovative and sophisticated, but it tended to avoid quantitative approaches, favoring more qualitative ones. One justification for this was that it is important to understand

how and why economic actors do what they do on their own terms.

However, quantitative approaches to describing and explaining the changing patterns of economic growth remain important, with certain university geography departments making this a signature of their research (such as the London School of Economics).

In California, Michael Storper and Allen Scott have used secondary quantitative data sets in their explorations of the roots of sustained regional economic growth. These approaches rarely extend to forecasting economic geographies, remaining focused on current and past patterns of investment and production.

Economic geography's relation to mainstream economics has grown closer since the creation of the Journal of Economic Geography in 2000. However, the sub discipline is far more politically left-wing than fifty years ago and today it draws much intellectual inspiration from the critical wings of economic sociology, business studies, the sociology of work, and management studies. The effects of the 1970s critique of location theory endure.

Leading economic geographers have been critics of neoliberalism and have analyzed capitalism from the

perspective of ordinary working people (see labor geography), in the process highlighting the key links between production and social reproduction.

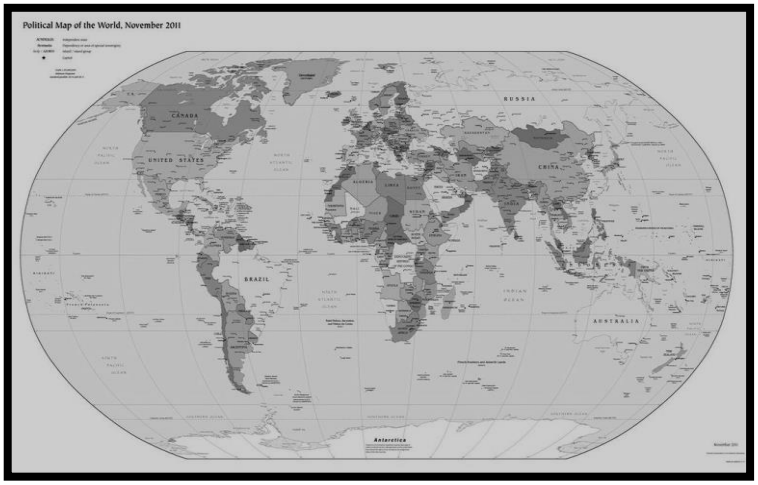
Many have also explored how economic geographies are implicated in culture in various complex ways, thus challenging economists' belief that 'the economy' is something separate in kind. In sum, economic geography today is plural and dominated by no one approach. This makes it a rich environment for practitioners but threatens to weaken the field's external visibility and impact in academia and the wider society

Chapter 7

Political Geography

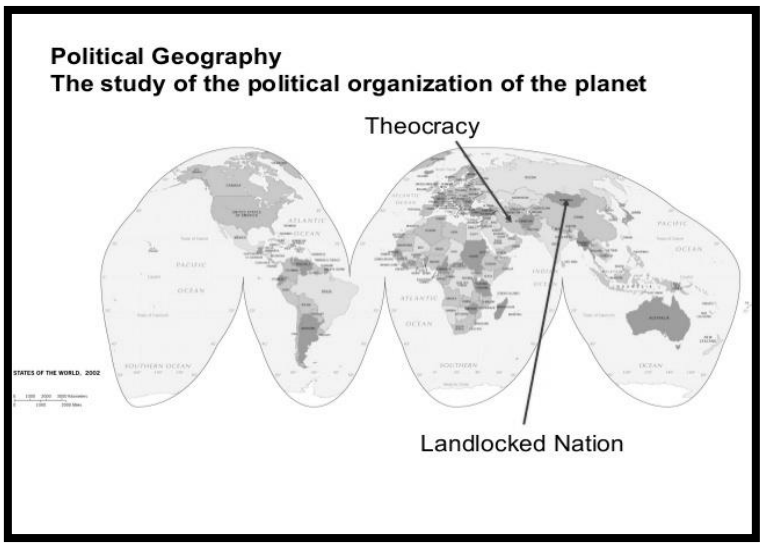
Political Geography:

A sub discipline concerned with the study of the spatial dimensions of politics. Although sharing many of the theories, methods, and interests as human geography in general, it has a particular interest in territory, the state, power, and boundaries (including borders), across a range of scales from the body to the planet.



'Politics' refers not simply to the formal organization of political life through government, elections, parties, etc., but all aspects of social life involving governance or where some degree of contentiousness or conflict may arise. Interpreted more broadly, therefore, political geography can encompass all those ideas about the relationships between geography and politics extending beyond academic contexts (see anti-politics)

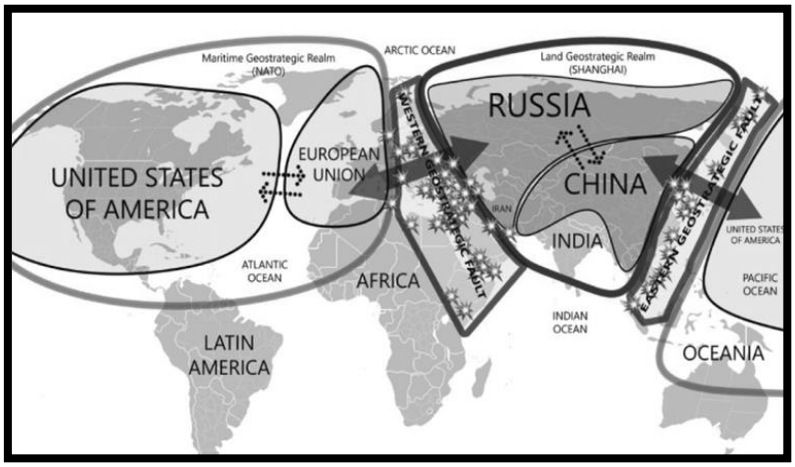
Political geography has meant and studied different things in different contexts. In the late 19th century it was partly synonymous with human geography as a whole. Friedrich Ratzel is credited with the first use of the term in his book Politische Geographie, in which he aligned non-physical



geography with the study of the state in space. Mackinder similarly distinguished political and physical geography. The work of geographers in France, Germany, Britain, and the USA in exploring the geographical foundations of state power is now more commonly classified as geopolitics. Anxious to distance themselves from the German school of geopolitik because of its close links to the Nazi regime, prominent US geographers such

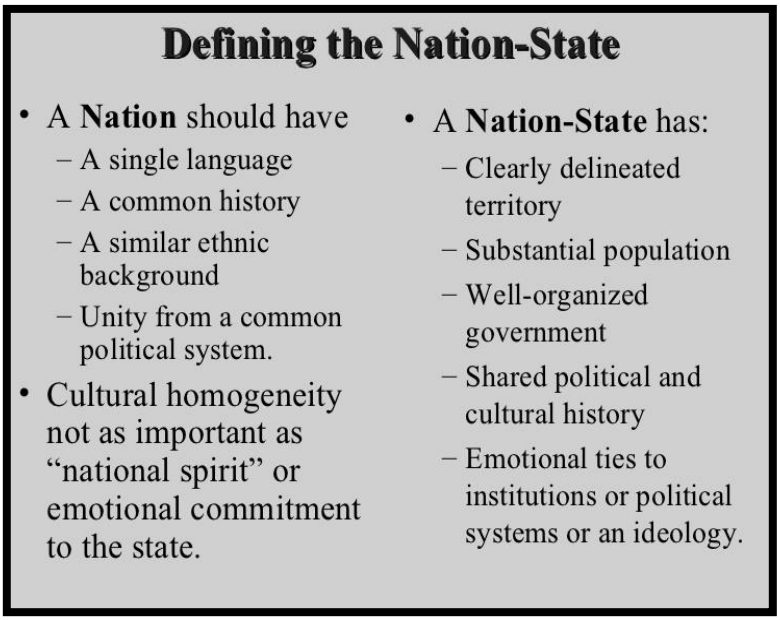
as Isaiah Bowman and Richard Hartshorne described their work as ‘political geography’.

But, actual empirical research in the field dried up, perhaps because of the taint of geopolitics, and theoretical advance halted. The main exception was work on boundaries and boundary disputes, which was a preoccupation of French and German geographers before the Second World War and of interest to British



geographers in the subsequent phase of decolonization. In terms of theory, a notable exception was the work of French geographer Jean Gottman who, like Hartshorne, tried to understand the relations between the modern state, territory, and identity. His recognition of the significance of iconography and the state idea prefigured later contributions.

In the 1960s, political geography was reframed in terms of political studies from spatial perspectives, with elections, boundaries, and subnational administrative organization



among its subject matter (see electoral geography; spatial science).

A core problem for example, was the effect of international boundaries on spatial interaction. The impact of the cultural and political upheavals across the world in the late 1960s was twofold.

On the one hand, impelled by radical geography and informed by Marxism, feminism, and socialism, swathes of human geography became politicized, i.e. were more attentive to conflict and difference and prepared to

challenge the existing order. In one sense, most if not all, human geography could be described thereafter as political. The specific area of a self-described political geography itself enjoyed a revival.

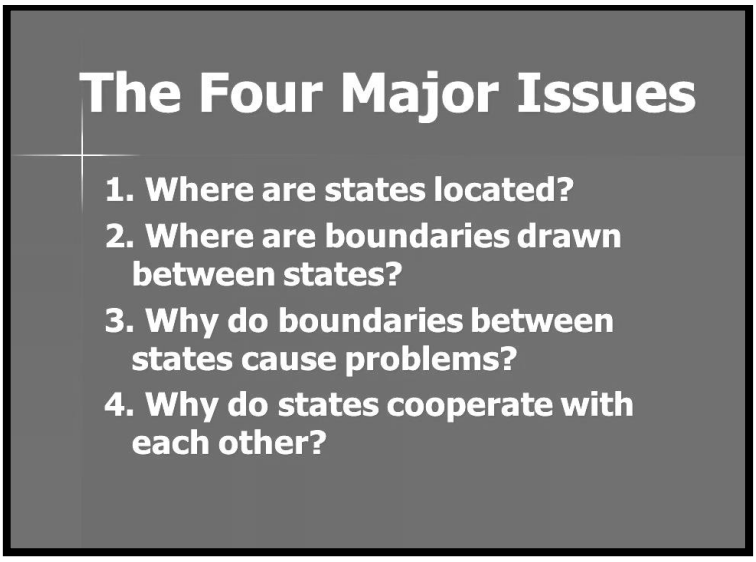
The former focus on the state gave way to an interest in the world scale; for example, in Peter Taylor's development of the world-systems approach, as well as the urban scale, in the work of Kevin Cox, Ron Johnston, David Harvey, and others. Issues of class, and later race, gender, and sexuality came to the fore.

In France, Yves Lacoste founded the journal Hérodote (1976) to introduce French geographers to some of the radical ideas of the country's new generation of social and political theorists. The leading journal Political Geography Quarterly (later renamed Political Geography) was founded in 1982, marking the recovery of the field.

Thereafter, political geography generated and responded to the same currents as human geography in general, including postmodernism, post-structuralism, and post-colonialism (see critical geopolitics). To the long-standing interests in the state, power and boundaries, modern courses and texts in the field include sexual politics,

citizenship, social movements, civil society, globalization, and environment.

Indeed, globalization has reopened older debates about the



relations between territory, identity, and boundaries. Wars in the Balkans, Afghanistan, and Iraq, and the related 'war on terror' have prompted a greater interest in violence, both state and non-state (see terrorism; war).

Political ecology marks the overlap between political geography and a concern for nature, resources, and the environment.

Given the significance of climate change, food security, and oil resources, political geographers have in some ways revived the preoccupations of their 19th-century

predecessors for the physical environment, although without the trappings of environmental determinism.

shape of the land:

The boundaries of a country and the shape of the land that it encompasses can present problems or it can help unify the nation. Each shape of state has advantages, as well as disadvantages.

The shape of most countries can be divided into five main categories: compact, prorated, perforated, fragmented, and elongated.

-Compact:

A compact shaped state is small and centralized. This type of state is the simplest to manage, since the government is close to all portions of the state.

The compact form helps to keep the country together by making communications easier within it. In

addition, compact states are much easier to defend than states of other shapes. However, compact states are primarily small in size, and therefore may not have as many natural resources as larger states have. A perfect example of a compact state would be Poland.

- prorated: prorated state has a long extension, or an extended arm of territory. This protrusion gives the state several advantages. For example, the state gets easy access to the coast and the local resources around it. In addition, prorated states are also able to prevent a rival access. An example of a prorated state would be Thailand.

- Perforated:

perforated state completely surrounds another. A classic example would be South Africa since it surrounds Lesotho. The surrounded nation can only be reached by going

through one country. More problems can arise if there is hostility between the two nations. This makes it difficult to enter the surrounding nation. --

-Fragmented*:*

A state that is separated by a physical or human barrier. This creates several problems for the country. Many portions of the state are separated by oceans, lakes, and mountains. It is difficult to govern such a country composed of islands, such as Indonesia. In addition, communication is difficult within the state; since portions are separated from the main part of the country.

– Elongated*:*

An elongated shaped state is long and narrow. This type of state also has many disadvantages. For example, they are difficult to defend. An elongated state, such as Chile, makes for

difficult governance of the peripheral areas in the north and south. However, an elongated state encompasses a variety of landscapes

– **Enclave:**

A country or part of a country that is surrounded by another. However, an enclave does not have political affinity to the surrounding state. Also, an enclave does not belong to another country. For example, the Vatican City is an enclave of Rome. The Vatican City has its own government and is independent from Rome and Italy. Therefore, it is not bound by the rules of Rome, as well as the rules of Italy

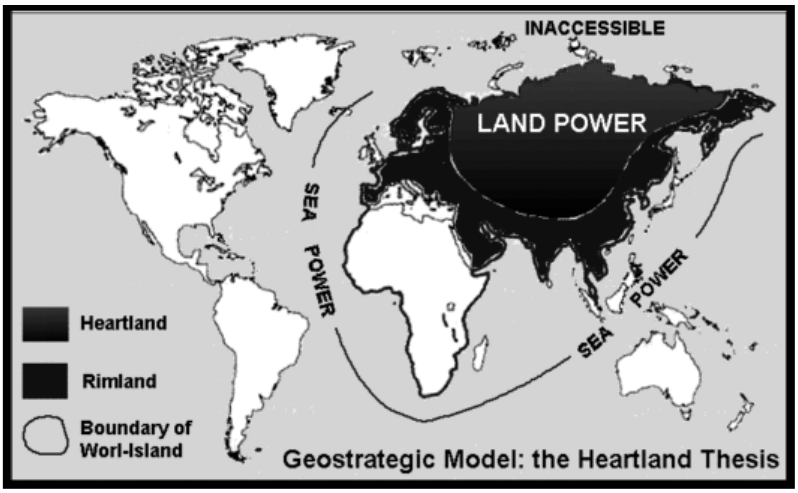
– **Exclave*:***

An exclave is part of a country that is or almost completely separated from the main part of the country. Alaska is an example of an exclave. Although it is separated from the U.S., it shares boundaries

with Canada. Another example is Hawaii, which is completely separated from the U.S. by the Pacific Ocean.

-The Heartland Theory:

In 1904, Sir Helford Mackinder published the Heartland theory. The theory proposed that whoever controls Eastern Europe controls the Heartland. It also supported the



concept of world dominance.

more revised version explains that whoever controls the heartland, controls the world island. Whoever controls the World Island, will soon rule the world. In other words, the group or nation who

dominates the heartland, can then extend its domination over a far wider area. The heartland has primarily been Central Asia, the high seas, and Eurasia.

The Nazi party was in favor of the concept during World War II. The idea was very popular with the party, and they sought to achieve it. Also, the theory was accepted by the Soviet Union during the Cold War. Each nation made great territorial strides toward the heartland, but to no avail.

-Mahan's Sea Power Theory:

Alfred Thayer Mahan believed that domination and power was associated with the sea, with its usage for trade and its control in war. He soon published his theory in his book, *The Influence of Sea Power Upon History,* which discussed the factors needed to support and achieve sea power.

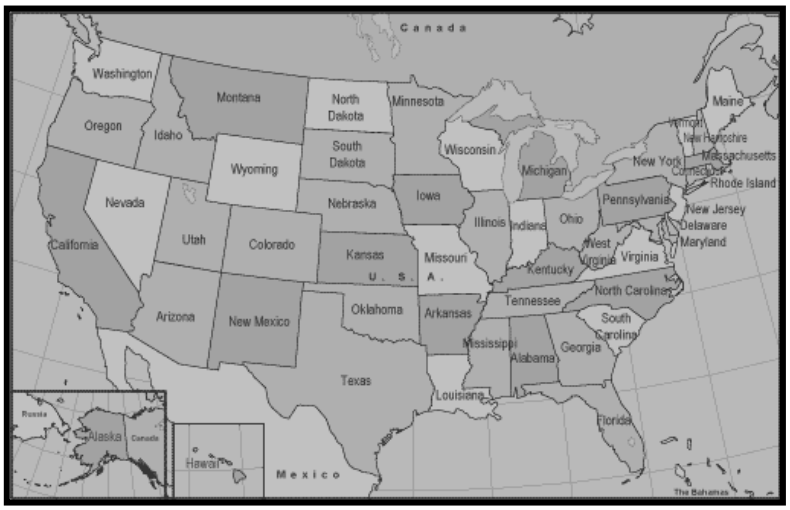
- Explanation Mahan argued that sea power was crucial in determining national supremacy. In other words, if you controlled the sea, you would control the whole world.
- Example the British Empire first adopted Mahan's theory and used the strategy to win many decisive battles. The United States also accepted Mahan's theory and used it tactically in several battles as well. Today, the United States has naval fleets stationed at sea, which also supports the theory.

-Federal and Unitary States:

federal state places its power in the hands of a central

government, as well as its sub-state territorial units. A unitary state, however, shares its power between local and national governments.

- Explanation: In a unitary state, sub national units are created as well as abolished. Their powers may even be broadened and narrowed. The small administrative divisions exercise only powers that the central government, which remains supreme, chooses to appoint. On the contrary, federal states share sovereignty with the central government. The states of the federation have an existence and power functions that can't be changed by



the central government. Some countries are unitary states, but also have federal systems. These countries are considered a hybrid of the two.

- Example the United Kingdom is an example of a unitary state. Wales, Scotland, and Northern Ireland, and England all have a degree of autonomous devolved power. However, the power is only appointed by Britain's central government. An example of a federal state is the United States. Power is shared between the federal government of the U.S. and the U.S. states individually.

Chapter 8

Geography of Travel & Tourism

Geography of Travel & Tourism

A term to cover travel to places away from one's home environment undertaken principally for leisure but also for business.

Tourist activities generally involve spending money in a new location and do not involve remuneration from within the place or country visited. Definitions of tourism by international organizations such as the World Tourist Organization recognize anyone who spends at least one night but no longer than one year somewhere other than

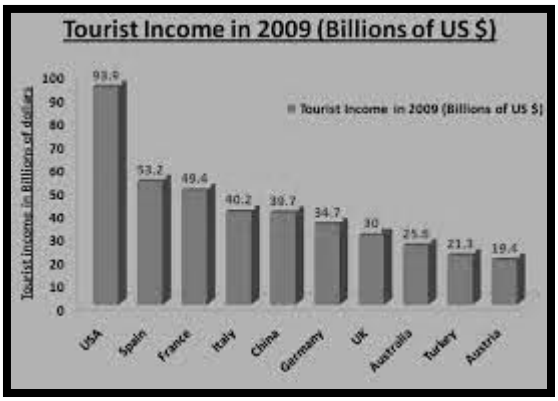
their country of residence as a tourist. Tourism is often distinguished from recreation because it takes place further from the home and is more commercialized. It overlaps with leisure, but includes business travel. In the Tourist Gaze (1991) John Urry argued persuasively that the core feature of tourism was the desire to gaze upon what

was different or unusual. Much of tourism can be understood in terms of the arrangements of places and landscapes to be viewed, and the cultivation of techniques of viewing and circulating images, e.g. photography, video, postcards, etc.

But tourist activities do more than please the sense of sight, and often involve multiple embodied experiences, e.g. kayaking, dining, and sunbathing. Tourism is a form of and has its origins in travel, but a distinction is often made between the two; travel is described as a more specialized, niche, or selective activity, while tourism is associated with organized popular or mass activities.

In part, the difference is one of marketing or discourse. Although tourism now includes an increasingly diverse range of activities, perhaps too many for convenient classification, it is often described as the world's largest industry. The World Travel and Tourist Council estimates that tourism accounts for 11 per cent of world GDP and 8 per cent of all waged work (200 million employees). But tourism as it is now understood is a relatively recent phenomenon.

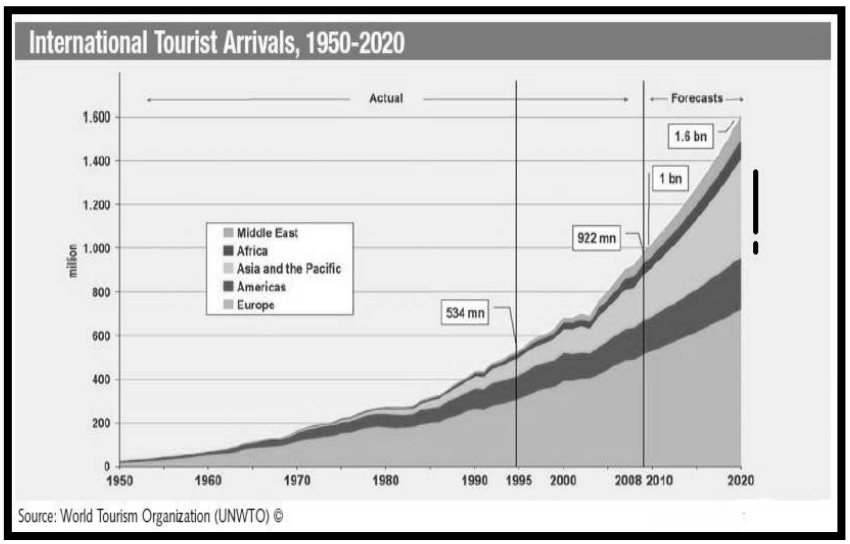
Most historical accounts trace its origins to the Grand Tour, undertaken by elite young European men between the 17th and 19th centuries. They would travel within Europe to see and learn about cultural matters, notably the fruits of the Renaissance and Greek and Roman classical civilizations.



Health spas, seaside towns, and mountain resorts also became fixtures for the wealthy traveller. The 19th century saw the development of journeys to wild places inspired by romantic ideas or picturesque or sublime landscapes: England's Lake District was a leading attraction (see wilderness).

The spread of road and rail travel in the 19th century allowed the urban working classes to enjoy annual trips to seaside resorts such as Long Island, New York, ushering in the first organized tourist industry.

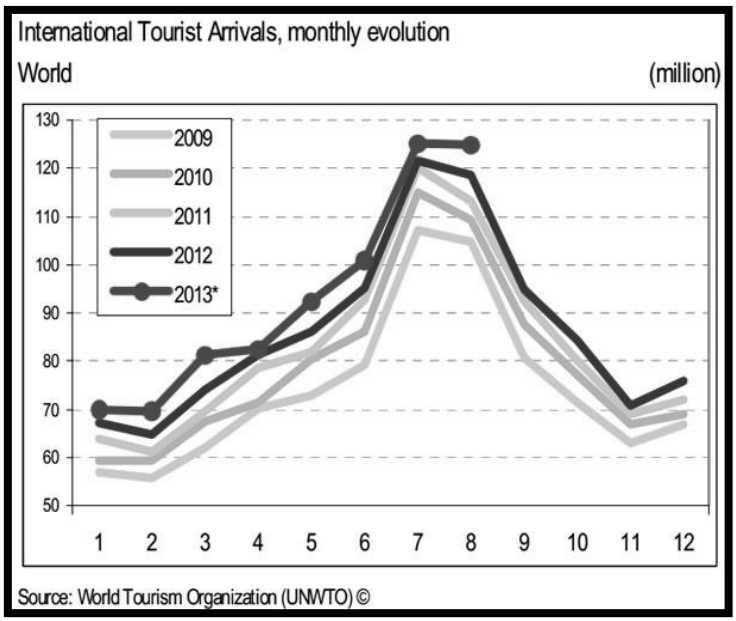
But it was not until the combination of greater affluence, more leisure time, and air travel after the Second World War that modern mass tourism took off. Until the late



20th century, however, it remained open largely to Westerners, and Europe itself accounted for the majority of international tourist journeys.

The globalization of tourism in the past two or so decades has involved almost every country becoming both an origin and destination of tourist travel to some degree. Close to a billion international tourist visits are now made annually, with China established in the top five for destinations and origins, alongside the USA and European countries. Singapore, Kuala Lumpur, and Dubai also count among the top tourist urban destinations.

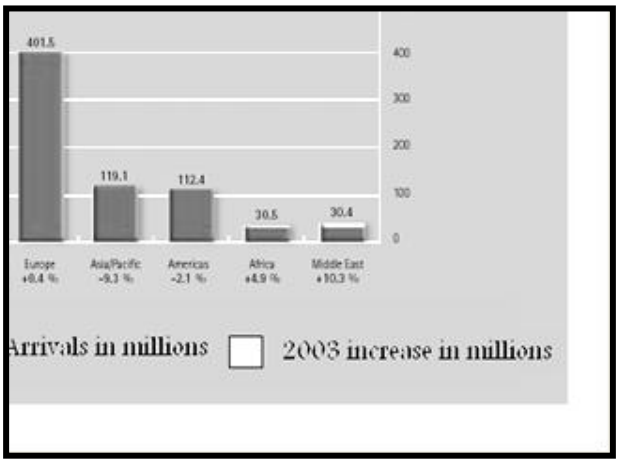
The geographical interest in tourism has developed strongly since the 1980s, although there are studies dating back to the 1930s. It draws upon the same range of methods and perspectives as the rest of human



geography, although there are important overlaps with environmental geography (for example, in coastal and marine environment management) and a strong element of applied geography. Given that tourism hinges precisely on the differences between one place and another, it is intrinsically geographical. The main areas of research are on factors of supply and demand, but also on social, economic, and environmental impact (see resort life-cycle model). There are separate studies of urban and rural

tourism, as well as a concern for regional differences (Hudman and Jackson 2003).

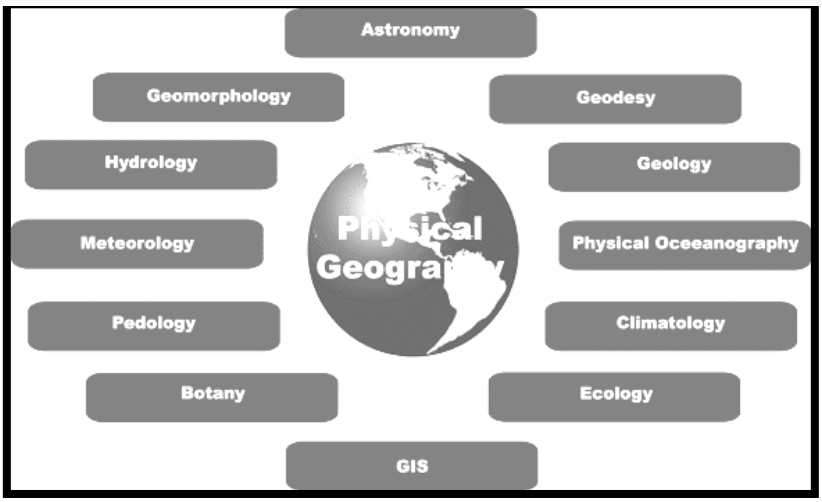
The different forms of tourism and their related bodily and sensuous experiences—heritage visits, ecotourism, package holidays, adventure travel, and backpacking among them—are also well studied. In unpacking the experiences of tours, however, it becomes apparent how many of its core characteristics—difference, exoticism, cosmopolitanism, leisureliness—are increasingly found more widely and even close to home. The interests of tourist studies in mobility, pleasure, and difference are, in this regard, central to much of current human geography. Travel & Tourism



Chapter 9

Physical Geography

Physical geography (also called earth science, or geosystems or physiography) is the study of our home planet and all of its components: its lands, waters,



atmosphere, and interior.

the processes of the atmosphere and its relationship to the planet's surface and all our living creatures. For as long as people have been on the planet, humans have had to live within Earth's boundaries. Now human life is having a profound effect on the planet. Several chapters are devoted to the effect people have on the planet.

The journey to better understanding Earth begins here with an exploration of how scientists learn about the natural world and introduces you to the study of physical geography and earth science.

are one of the two major sub-fields of geography. Physical geography is that branch of natural science which deals

with the study of processes and patterns in the natural environment like the atmosphere, hydrosphere, biosphere, and geosphere, as opposed to the cultural or built environment, the domain of human geography.

Physical Geography is a sub-discipline of two much larger fields of study - Geography and Earth Sciences. The main purpose of Physical Geography is to explain the spatial characteristics of the various natural phenomena associated with the Earth's hydrosphere, biosphere, atmosphere, and lithosphere.

Chapter 10

The Lithosphere

Is the name which we give to the solid crust of the earth. The materials of which it is composed are called rocks, whether they be hard soft.

Geology is the name of the science which deals with the crust of the earth, but it is necessary for us in geography to know something about its nature and composition.

We have learnt that the hypo sphere is the mantle of water which griddles the earth, but the lithosphere project through it and forms the continents. It is almost impossible to study that part of the lithosphere which is hidden below the ocean,

we can only study that part which forms the land.

- Changing in the earth's crust:

It is most important to release that changes are continually taking place on the surface of the earth. The change while are going on continually but gradually are of the three main kinds:

1- the wearing away of the land, which we call denudation. The wearing away which take place in the air is called Wearing.

2- the removal of material from one part of the earth's crust to another, which we call Transportation.

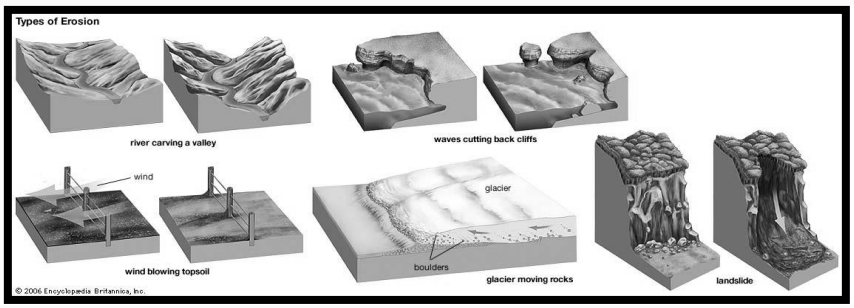
3-the laying down of this material in fresh, which we call Deposition.

There are also more sudden or discontinuous changes such as earthquakes, volcanic, eruptions, etc.

- Denudation of Erosion:

As soon as dry land appears above the surface of the ocean there are forces waiting to where it away, this is very apparent after a heavy rainstorm. The rain beats down on the ground and removes loses particles of soil, so that after a storm one may often

see that tiny valley have been cut at sides of the roads.



More of the larger streams and rivers of the British Isles especially after a period of heavy rains, are very muddy. The mud has been brought by the river from far away and is being carried out sea, where it will all be deposited. The rain and rivers are not the only against of the denudation, there are others.

Thus, the chief agents to be considered are the sun, wind, rain, frost, running water, moving ice and the sea.

-Action of the sun:

In hot countries the heat of the sun is very great during the day, and the rocks on the surface are made very hot. We know that when most things are made hot they expand or grow large, but some substances expand than other.

The rocks of the earth's crust consist of different substances called minerals, and the minerals expand at different rates.

One mineral expanding more quickly than the others causes the rock to burst so that cracks are formed. Then at night time the rocks get very cold and contract.

When this process is repeated day after day the cracks increase in size and gradually the rock breaks up into small pieces. This action of the sun is called Insulation, and is important in hot dry countries.

There are a few substances, too like salt, which are dissolved by pure water.

- Frost:

The action of frost is important in cold countries when the rain falls, part of it sinks into the ground and fills up the cracks in the rocks. At night, when it becomes very cold, the water in the crack freezes. Now when water is changed into ice it expands, so that the force of the water in the crack expending when it is changing into ice causes the rock to widen.

This goes on night after night the crack becomes very wide, and one day when the ice melts a lamp of rock breaks off. Frost is one of the most powerful agents in cutting away the tops of high mountains. It causes them to be very rugged and sharp edged. The angular blocks fall to the foot of the mountain and from heaps called Screed

- Running water:

When rain falls on the ground some of it sinks in, but a

great part of it collects together to form little streams, which in their turn join up to form rivers.

The streams cut for themselves little valleys, which at first tend to be deep and narrow.

The rain helps to wash away the banks, so that the valley becomes broader and broader with age.

The force of the water itself is sufficient to do a great deal of damage, especially after a heavy storm when the stream is in flood. But it is enormously increased by the load of stones and sand which the water collects.

Denudation by rivers and moving water takes place in all parts of the world except the very coldest. The denuding action of a river is greatest in its upper course, where it is following down steep slopes. Big slow rivers like the Thames or Rhine have little power to wear away the land.

- Moving ice:

In very cold countries, and in high mountains districts there it is equally cold, we find solid masses of ice instead of rivers.

These rivers of ice are called glaciers. Like rivers they occupy valleys. Compared with rivers, glaciers move only very slowly, but they do move. Fresh snow is falling on the mountains behind them and by its weight helps to push the glacier down its sloping valley. Some very cold countries such as Greenland are almost completely covered by a great ice – sheet. Formerly similar

ice-sheets covered much of Europe including the greater part of the British Isles and North America, and have left behind many evidences of their one-time existence.

- The Sea:

is a powerful agent in wearing away the land, especially in time of storm? Each wave hurries a great means of water against the shore and washed away the soft parts

Naturally, the sea cuts away the soft rocks more rapidly than the hard. The harder parts are left as headlands, caps, and islands. Not only the coast, but it pounds the pieces against one another till they are worm into pebbles and sand.

The action of the sea does not extend to a great depth, and the area of land which has been worm away is marked roughly by the extent of the continental.

We must notice that the other agent of denudation cut the surface into hills and valleys. But the sea wears them away until a nearly flat surface is formed.

- Transportation:

Some of the same agents which are capable of wearing away the land are also able to carry the material from one place to another.

Wind:

The wind blows fine dust for great distance. The interior of China is covered by a thick mantle of fine dust – called Loess-, which has been blown to its present position by the wind.

Wind also blows sand from the sea shore for great distances in land. Dust-storm are common in dry country and in deserts sand is constantly moved by the wind. In dray farming country the wind sometimes causes great damage by blowing away the soil (wind erosion).

-Running water:

Rivers are the most important of all transporters of material. Some of them are many thousands of miles long, and so carry mud and sand for enormous distances.

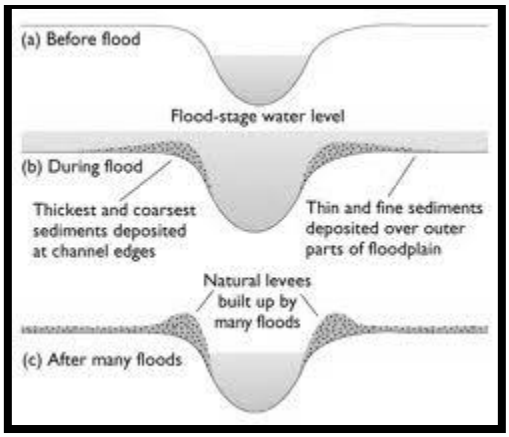
- suspension:

that is suspended in the water itself. If one takes some water out of our rivers when in flood it is very muddy. If the water is left for some time without moving it, the mud will settle to the bottom .

Fine particles such as mud, silt and sand transported in this way are be carried in suspension.

2- Along the bed of the river:

quite large stones can be moved great distances by being rolled along the bed, but as they are rolled along they are knocked against one another and gradually made smaller.



-Moving Ice:

Glaciers also carry material in two ways. Mud, stones, and big boulders are frozen into the bottom of the glacier and make the surface over which they are carried with long scratches.

-The sea:

The sea carries material in two directions. It rolls pebbles and sand laterally along the coast. It also gradually moves the material which it broken away from the coast into

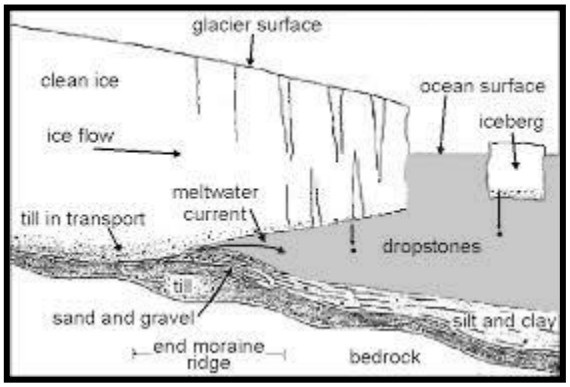
deeper and deeper water. Mater of the material brought down by rivers is farther away when it reaches the sea.

-DEPOSITION:

There comes a time when all the material which has been worn away from one part of the earth and carried to another is laid down again or deposited.

-Wind deposits:

The land in dry countries – China- are often covered by a thick mantle of wind-borne dust called Loess. The sand pollen from sea shores and in desert is deposited as crescent shaped sand dunes. The sand dunes found on many parts of the coast of Corneal (England) are good examples.

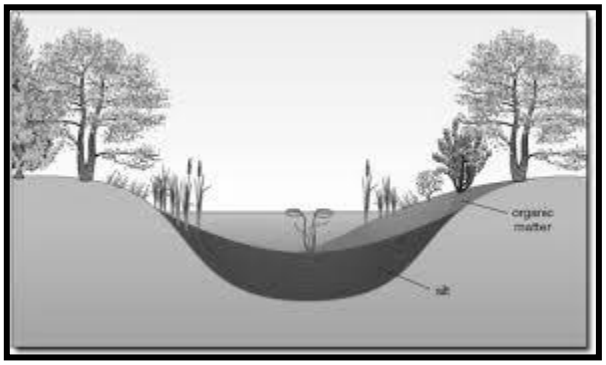


-River Deposits:

Where a swiftly flowing mountain stream suddenly enters a flat area it often drops mud and stones, forming an alluvial fan. Where a river enters on a flatter portion of its valley and the current becomes slower. The river drops mach of the sand it is carrying and so forms sand banks.

-Lake Deposits:

When a river enters a lake, mud and sand are dropped until gradually the lakes filled up.



Lake Geneva is a good example.

-Glacial Deposits:

When glacier from the mountains descends to lower levels where the air is warmer, the ice melts and the moraines are deposited.

-Sea Deposits:

or Marine Deposits. Near the shore we find coarse deposits of sand and pebbles (Littoral Deposits).

-Organic Deposits:

Besides mud, sand, and stones which are dropped on the floor of seas ,lakes and rivers, we find deposits which are formed of the remains of animals and plants.

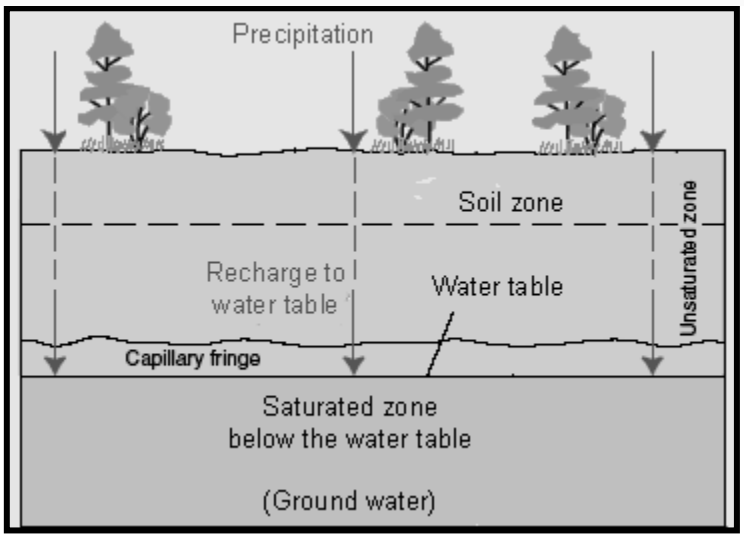
-The River Basin:

The whole of an area drained by a river and its branches is called the river basin. Tow basin are usually separated by a ridge or hills which form the water – parting or watershed. Some river drains into lakes with no outlet and

not into the sea at all, and their basins are called basins of in land drainage.

-Underground water:

Some of the rain which falls up on the ground sinks into the rocks beneath. The amount which sinks in depends upon the nature of rocks. Some rocks allow water to pass through them very easily- they full of small cracks or holes- and are called permeable.



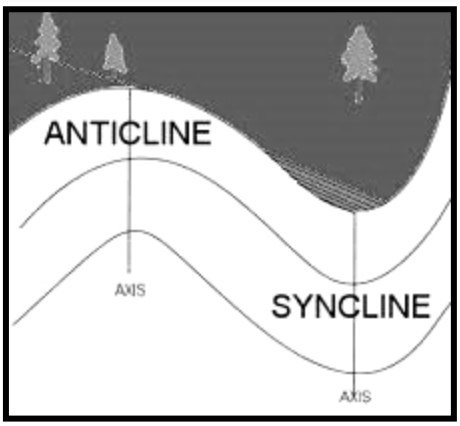
Other rocks like clay will not allow water to pass through them, and are called impermeable.

Let us see what happens when the rain-water sinks underground and meets an impermeable rock. It will then travel along the surface and find its way out on a hill side as a spring.

Such as a spring often forms the source of a river, see what happens when the rocks are bent into a hollow curve or

syncline. The water is trapped in the center, and by putting a well in the center we get a good supply of water.

Such a well is called an artesian well. If the water gushed out at the surface, there is a small artesian basin under London, and in the Murray basin and many other parts of Australia, there are vast artesian areas tapped by numerous wells.

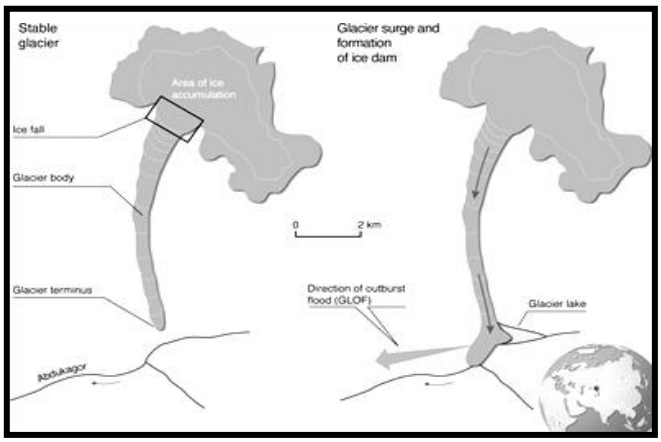


- The Formation of Lakes:

Lakes may originate in many ways.

1- A river valley may be blocked by a fall of rock or a lava flow.

2- The lower end of a river valley may be raised up by an earthquake. Many of the lakes in the Alps were formed in this way.



3- An arm of the sea may be cut off to form a lake. The Caspian Sea has been formed in this way.

4-Sand- dunes throw up the sea may impound river water coming

river – bed may form lakes.

5- Small lakes may occupy the craters of old volcanoes. down from the hills. The shallow lakes Alexandria, Albert, and the Coorong at the, oath of the Murray in Australia have been formed thus.

6- Parts of deserted

7- Many lakes occupy hollows scooped out by glaciers or by the great ice- sheets which once covered many parts of the globe. The lakes of Canada are examples.

8- Some important lakes occupy rift valleys; Lake Tanganyika is a good example.

Chapter 11

Sudden changes in the earth's crust

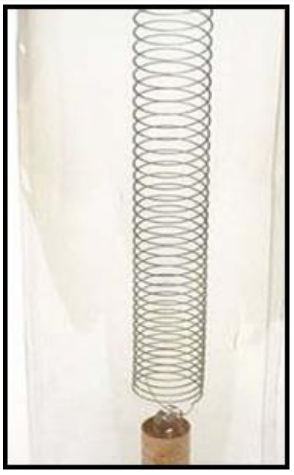
When the crust gets weak the pressure is less, and so underground where it is very hot the rocks become molten and begin to move. The movement of molten rock underground causes the solid crust shake, and this causes earthquakes.

Sometimes the molten finds its way to the surface and is poured out as volcano.

- **Earthquakes:**

Earthquakes also called temblors, can be so tremendously destructive, it' s hard to imagine they occur by the thousands every day around the world, usually in the form of small tremors.

(Seismograph)

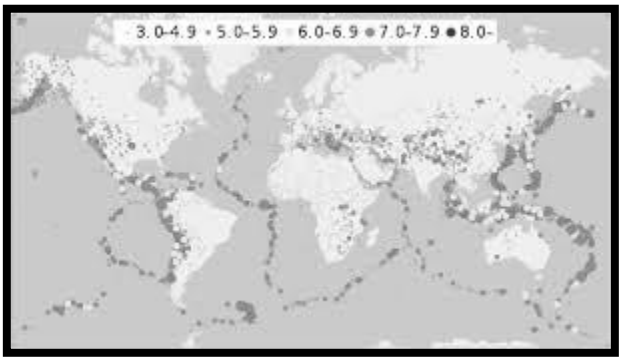


The movement of molten deep down in the earth's crust causes the surface at shake, and we living on the surface, feel an earthquake. Some earthquakes are connected with volcanic eruption, but much more important are the earthquakes which result from the movement of material underground – a movement which we cannot see.

Like volcanoes, earthquakes usually occur along weak places in the earth's crust Some of them are actually connected with cracks in the crust.

These faults and often after an earthquake the rocks on one side of the fault are seen to have moved up and on the other side to have moved down, leaving a small cliff.

We see that there are four principal result of earthquakes:



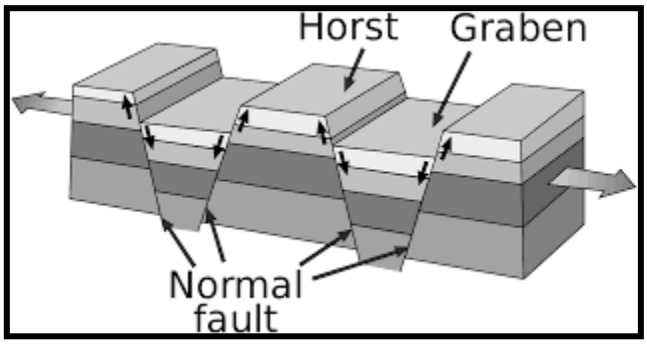
1- the surface of the earth is folded; some parts move up and others move down.

2- Along cracks of faults the rocks are moved up on one side and down on the other or sometimes sideways.

3- large areas may be lifted up above sea-level so that they become dry land, other areas of dry land become covered by the sea.

4- In some parts of the world large blocks of country have been rent by great cracks crossing one another roughly at right angles, along cracks the rocks are shattered and more easily removed by the agents of denudation such as rivers and glaciers.

The two most important kinds of mountains are fold mountains and block mountains.



Both kinds are produced by a long series of earthquakes.

-Fold mountains:

As a result of one series of earthquakes a level stretch of the earth is gently folded like this: one part is ridged up to form mountains often of great high while the other part is covered by the water of the ocean.

Mountains formed in this way are by far the most important in the world – the Himalayas, Alps, Andes, Rockies, etc. They usually form long lines or ranges of mountains, such as the great chain which runs through the continent of America from north to south.

Of course it takes a long time and a great many earthquakes for such a great mountain chain to grow.

The mountains of Wales and many of Scotland are those of folded mountains of ancient rocks.

-Block mountain:

sometimes a big mass of land is pushed up between several cracks and so forms a mountain which we call a block mountain.

-Mountains of accumulation: there are other kinds of mountains besides fold and block mountains. Volcanoes are often called Mountains of

Accumulation because they are formed by the accumulation of material which is thrown out on the surface and so gradually built up into hills.

The new example of such a mountain Paricutin in Mexico. It only began to accumulate in 1944, four years later it was 2.000 feet high.

Mountains of Denudation:

We have learnt how the agents of denudation gradually wear away the surface of the land. As soon as block mountains or fold mountains are formed they begin to get worn away some times only a small piece of the original mountains may be left, all the rest being worn away. Such a fragment left behind is called a mountain of denudation. The peak, Derbyshire, is a good example.

Slow movements of Elevation and Depression:

A single earthquake may produce a considerable change, and several earthquakes may result in great changes

although no mountains are formed. We find that in many parts of the world the land is steadily rising or sinking.

In many parts of the world beds of seals are found high above sea-level. In the raised beaches round the English coasts; in other parts the remains of forests are found covered by the sea. This shows that the land relative to the level of the sea is rising in some parts and sinking in other.

- Plains and plateaus:

We learnt that the sea is the most important agent which wears away a flat surface (the surface of the continental). If part of this surface becomes raised into dry land, it forms a pen plain.

A pen plain may also be formed by rivers, when a river becomes old it swings from side to side, and gradually the valley sides are worn and almost disappear.

The ridge between one valley and the next can be seen, and the whole surface of the land is almost a plain-a pen plain, sometimes spelt pen plain.

-The movement of elevation:

may cause a large area to be raised a considerable height above the see- level. We must remember that as soon as a stretch of dry land is formed; the sun, rain, frost, running water, and ice commence to wear away.

Such a big flat- topped stretch of high land is called a plateau. If the rocks are soft they will be worn away quickly, but if they are hard, they are removed only slowly. Only the top of the mountains remains a approximately on a level to remained a dissected plateau and peninsula India is an example.

-Volcanoes:

A volcano is a vent or fissure in Earth's crust through which lava, ash, rock and gases erupt. A volcano is also a mountain formed by the accumulation of these eruptive products. Let's take a look at how volcanoes form:

Earth's crust is 40 to 250 miles (64 to 402 kilometers) thick. It is broken up into 14 major and 38 smaller pieces called tectonic plates.

These plates float on a layer of magma — semi-liquid rock and dissolved gases. At the boundaries of these plates — where they move past, are pushed under, or move away from each other — magma, which is lighter than the surrounding solid rock, is often able to force its

way up through cracks and fissures. Magma can explode from the vent, or it can flow out of the volcano like an overflowing cup. Magma that has erupted is called lava.

-Volcanoes in history:

A.D. 79: One of the most famous volcanoes is Mount Vesuvius, which sits along the Bay of Naples in southern Italy. It has erupted more than 50 times in the past 2,000 years. The A.D. 79 eruption, which buried Pompeii, made Vesuvius famous, but another eruption in 1631 killed some 4,000 people.

1669: In Sicily, Mount Etna sent a river of lava through the streets of Catania, killing some 20,000 people there and in the surrounding region. [Video: Mount Etna's Dramatic New Eruption]

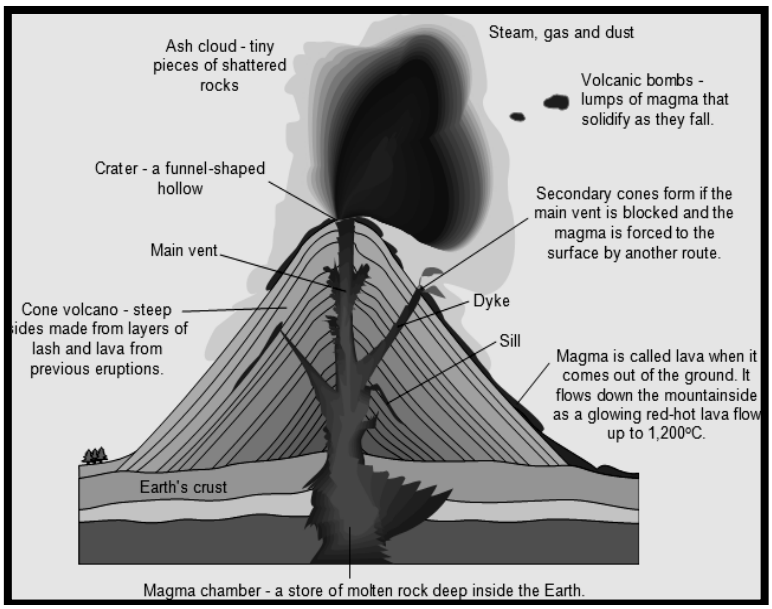
1783: The eruption of Mount Skaptar in Iceland devastated farming and fishing, causing a famine that killed a fifth of the country's people.

1815: Whirlwinds and tsunamis from the eruption of Mount Tambura, on Sumbawa Island in Indonesia, killed 12,000 people. The volcano sent a cloud ejecta into the atmosphere that was more than four times the amount ejected by Mount Pinatubo in 1991.

1883: Another Indonesian volcano, Krakatoa, erupted in an explosion heard 3,000 miles away. Seventy-pound boulders

landed on islands 50 miles away, and a 130-foot tsunami devastated hundreds of villages, including Java and Sumatra. About 36,000 people died. Dust high in the atmosphere caused the Moon to appear blue, and sometimes green, for two years.

1902: Mount Pelé, on the island of Martinique, smothered the town of Saint-Pierre in deadly gas and hot ash, killing 29,933 of the 29,937 residents.



1980: Mount St. Helens in Washington state blew 1,300 feet off its top, killing 57 people and causing a midday darkness in towns 85 miles away.

1991: After 600 years of dormancy, Mount Pinatubo in the Philippines rumbled for days before erupting and killing about 750 people. Ash was more than 6 feet deep in a two-

mile radius around the volcano, and buried a U.S. air base 15 miles away.

Pinatubo's cloud of sulfuric acid, some 20 million tons of it, climbed to more than 12 miles in the stratosphere. Over the next several weeks, the cloud encircled the equator and spread to the poles, covering the entire planet. The particles reflected sunlight and cooled the Earth by nearly a full degree Fahrenheit.

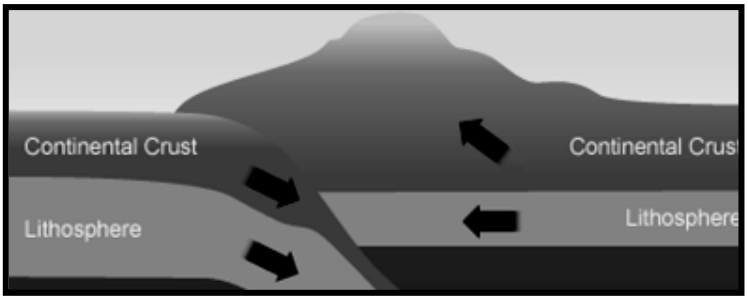
A volcano is a mountain that opens downward to a reservoir of molten rock below the surface of the earth. Unlike most mountains, which are pushed up from below, volcanoes are vents through which molten rock escapes to the earth's surface.

When pressure from gases within the molten rock becomes too great, an eruption occurs. Eruptions can be quiet or explosive. There may be lava flows, flattened landscapes, poisonous gases, and flying rock and ash that can sometimes travel hundreds of miles downwind.

Because of their intense heat, lava flows are great fire hazards. Lava flows destroy everything in their path, but most move slowly enough that people can move out of the way.

Fresh volcanic ash, made of pulverized rock, can be abrasive, acidic, gritty, gassy and odorous. While not

immediately dangerous to most adults, the acidic gas and ash can cause lung damage to small infants, to older adults and to those suffering from severe respiratory illnesses. Volcanic ash also can damage machinery, including engines and electrical equipment. Ash accumulations mixed with water become heavy and can collapse roofs. Volcanic ash can affect people hundreds of



miles away from the cone of a volcano.

Sideways directed volcanic explosions, known as "lateral blasts," can shoot large pieces of rock at very high speeds for several miles. These explosions can kill by impact, burial or heat. They have been known to knock down entire forests.

Volcanic eruptions can be accompanied by other natural hazards, including earthquakes, mudflows and flash floods, rock falls and landslides, acid rain, fire, and (under special conditions) tsunamis.

Chapter 12

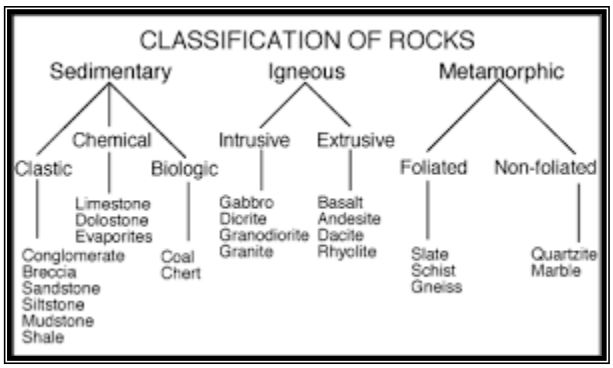
The Rocks

We learnt that the materials making up crust of the earth are called rocks.

We classify them into four main groups according to the way in which they have been formed.

1- Sedimentary Rocks:

Are those which have been laid down in beds or layers – strata- by wind, running water, or the sea. They are many ways the most important. Animals or plants may sometimes be buried and their hard parts may remain. When afterwards the sediments are raised by earth- movements into dray land we may find sea-ls, etc.



We can divide sedimentary rocks into three subdivisions:

A- Alluvium, which is still being formed by rivers.

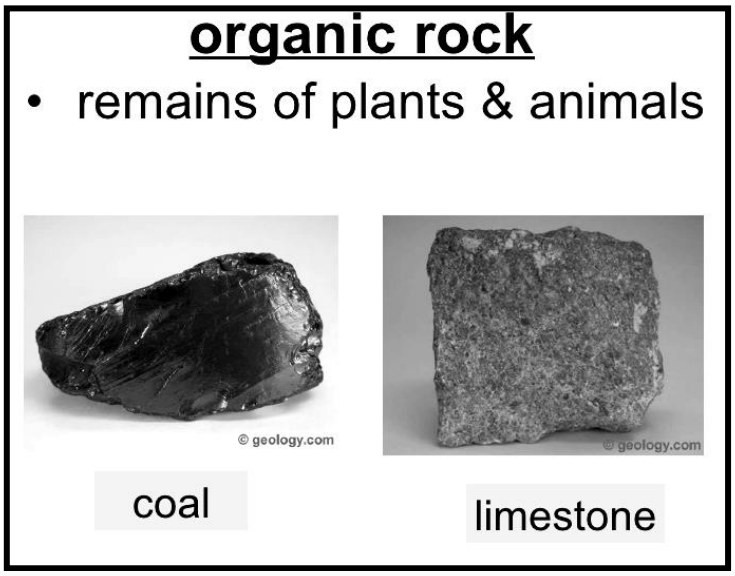
B- Young soft rocks:

which have not been subjected to great earthquakes or mountain- building movements. It is in such rocks that oil

is found. Examples are clay, shale, and sand.

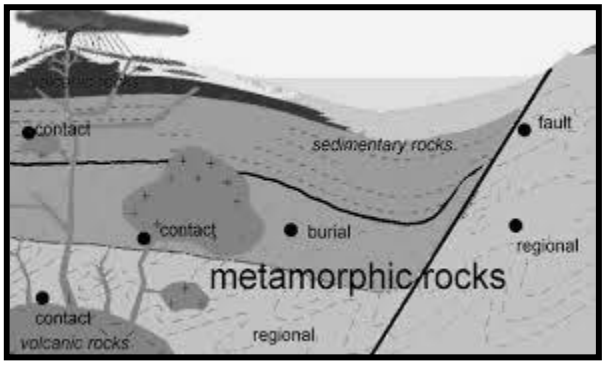
C- old hard rock's:

which have been bent, flooded, and cracked by many



earthquakes and often raised into high mountains.

Even amongst the soft rocks we usually find hard bands which give rise to waterfalls



etc. Sandstone is an example.

2- Organic rocks:

Are rocks formed of the remains of animals or plants? Coal is an organic rock which is formed from the remains of forests which have been submerged and then buried.

Mineral oil has been formed from the remains of animals or plants buried when a river deposited its load of mud in the sea or a lake.

The important point for us to remember in geography is that coal and oil are always found in sedimentary rocks. If we come to a country where the rocks are not sedimentary. It is quite useless to for coal.

Many limestones are organic rocks because they are built up of the hard parts of animals living in the sea which have extracted of animals living in the sea, which have extracted the calcium bicarbonate from the calcium, Coral is an example.

3. Igneous Rocks:

Which means the rocks are those resulting from the interior heat of the

earth. There are two main kinds:

A- volcanic rocks:

Those which reach the surface in volcanoes. Large area of rocks in Antrim, north east Ireland, and in the Snake River area of the north- western United states have originated in this way. A common example is basalt

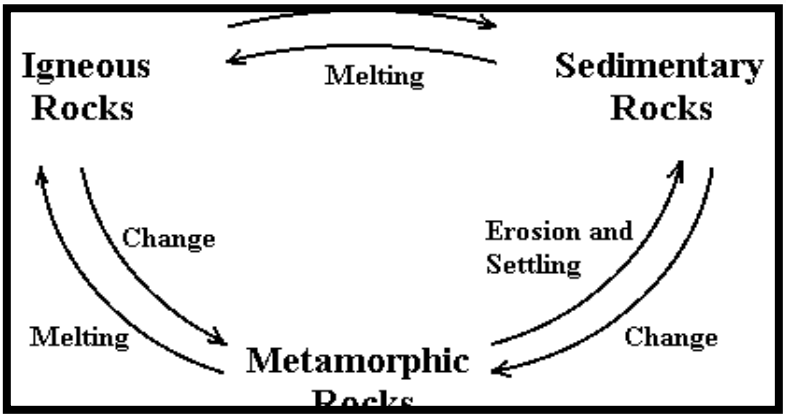
B- Granite:

Those which moved underground but became solid before they reached the surface. We should never be able to see these rocks if it were not for denudation.

A good example of these rocks is granite. Such rocks are usually hard and resist weathering as seen in such granite masses as dart moor or Shape Fell, Cumberland, in England or the Coast Range of British Columbia.

4- Metamorphic Rocks:

which have changed their forts. We have learnt that



earthquakes bend and fold the earth's crust and gradually

build up great mountains. In the process the rocks are hardened and changed.

may be altered by the great heat in the lower part of the earth's crust. We know that if we take a pike of clay and bake it, the brick which results is quite different from the clay: this is an excellent example of how heat may alter rocks.

Deep in the earth the rocks may be altered far more and it is almost impossible to tell what the original rock was like. We call such rocks metamorphic or crystalline rocks. It takes a long, long time for to become changed like this, and some of the areas of crystalline rocks were formed ages ago and have remained unchanged ever since.

The central highlands of Scotland form are a good example, whilst the Canadian

Shield is one of the largest areas of such rocks in the world. Metamorphic rocks, like igneous rocks are usually hard and so resist withering.

- Gneiss and Shiest are examples:

Connection between structure rocks, and mineral products, areas of lowland will usually consist of alluvium or of young soft rooks, and so we shall expect oil and coal to be the principal mineral products of such regions.

Areas of highland or mountains will usually consist of old

hard rocks or igneous or metamorphic rocks, and so we shall expect ores mineral to be the principal products.

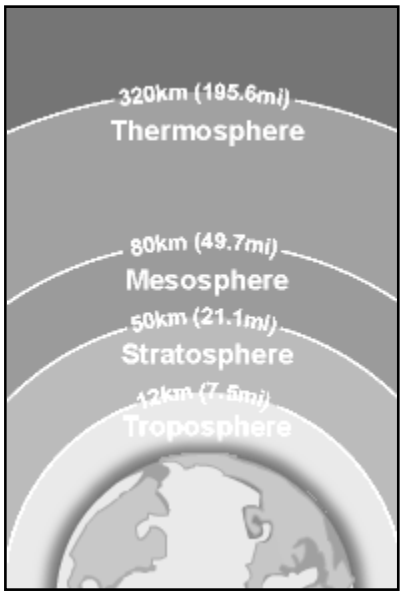
Chapter 13

Atmosphere and Climate

Layers of the Atmosphere:

Without our atmosphere, there would be no life on earth. Two gases make up the bulk of the earth's atmosphere: Nitrogen 78%, and Oxygen 21%.

Argon; carbon; Dioxide and various trace gases make up the remainder.



Scientists divided the atmosphere into four layers according to temperature: Troposphere; Stratosphere; Mesosphere; and Thermosphere.

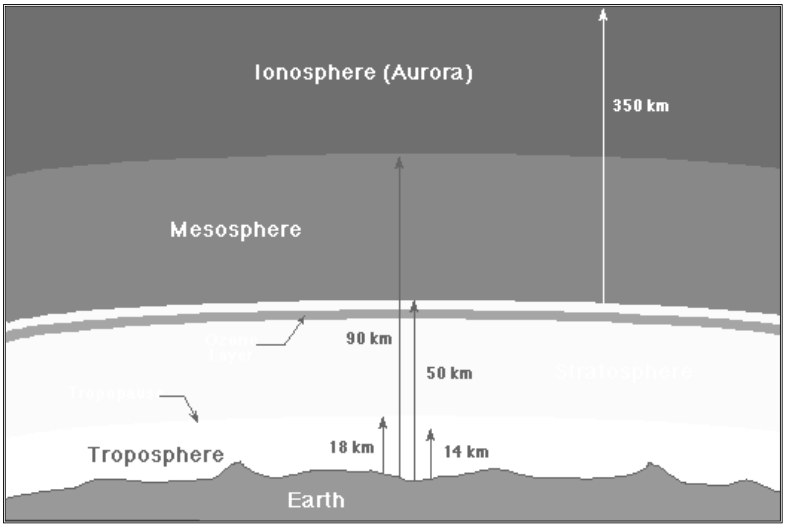
The temperature drops as we go up through the troposphere, but it rises as we move through the next layer) the stratosphere.

The farther away from earth, the thinner the atmosphere gets.

1- Troposphere

This is the layer of the atmosphere closest to the earth's surface, extending up to about 10-15 Km above the earth's surface. It contains 75% of the atmospheres mass.

The troposphere is wider at the equator than at the poles.
Temperature and pressure drop as you go higher up the troposphere.
At the very top of the troposphere where the temperature reaches a stable minimum.
Some scientists call the tropopause a cold trap because this is a point where rising water vapor cannot go higher



because it changes into ice and is trapped.
If there is no cold trap, earth would lose all its water.
The uneven heating of the regions of the troposphere by the Sun causes convection currents and winds. Warm, air from earth's surface rises and cold air above it rushes in to replace it.
When warm air reaches the Troposphere, it cannot go higher as the air above it – in the Stratosphere- is warmer

and lighter preventing much air convection beyond the Tropopause.

The Tropopause acts like an invisible barrier and is the reason why most clouds from and weather phenomena occur within the troposphere.

The Greenhouse Effect: heat from the sun warms the earth's surface but most of it is radiated and sent back into space.

Water vapor and carbon dioxide in the troposphere trap some of this heat, preventing it from escaping thus keep the earth.

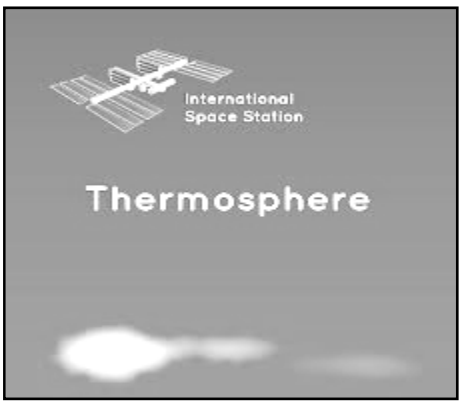
However, if there is too much carbon dioxide in the troposphere then it will trap too much heat. Scientists are afraid that the increasing amounts of carbon dioxide would raise the earth's surface temperature, bringing significant changes to worldwide, weather patterns shifting in climatic zones and the melting of the polar ice caps, which could raise the level of the world's oceans.

2- Stratosphere:

This layer lies directly above the troposphere and is about 35Km deep. It extends from about 15 to 50 Km above the earth's surface

The lower portion of the stratosphere has a nearly constant temperature with height but in the upper portion the temperature increases with altitude because of the absorption of sunlight by ozone. This temperature increase with altitude is the opposite of the situation in the troposphere.

The ozone layer: the stratosphere contains a thin layer of zone which absorbs most of the harmful ultraviolet radiation from the sun. The ozone layer is being depleted, and is getting thinner over Europe, Asia, North American and Antarctica... Holes are appearing in the ozone layer



3- Mesosphere:

Directly above the stratosphere, extending from 50 to 80 Km above the earth's surface, the mesosphere is a cold layer where the temperature generally decreases with increasing altitude.

Here in the mesosphere, the atmosphere is very rarefied nevertheless thick enough to slow down meteors hurtling into the atmosphere, where they burn up, leaving fiery trails in the night sky.

4-Thermosphere:

The thermosphere extends from 80Km above the earth's surface to outer space. The temperature is hot and may be as high as thousands of degrees as the few, molecules
That are present in the thermosphere receive extraordinarily large amounts of energy from the sun.
However, the thermosphere would actually feel very cold to us because of the probability that these few molecules will hit our skin and transfer enough energy to cause appreciable heat is extremely low.

Composition of the Atmosphere:

Covering the whole of the surface of the earth is the air, or atmosphere. We cannot see it, but we can feel it when it is moving. (wind). If we have a hand we can feel the air against it. In the sale way, if we drop a piece of paper it does not fall straight to the ground because the air prevents it, or as we say, offers resistance.
It is because the air offers resistance that men are able to use airplanes.

The air consists principally of tow gases oxygen and nitrogen. There are about 21 parts of oxygen and 79 parts of nitrogen. Man, and nearly all animals must have oxygen, or they cannot live, it is the oxygen we breathe that keep us alive. Just as coffee is not nice to drink unless it has been with sufficient water, so oxygen is too strong by itself, and that is the reason why nitrogen forms a large proportion of the atmosphere.

Thus, in the atmosphere there is also a little carbon dioxide. Or carbon acid gas. Now, plant such as trees and grass cannot live without carbon dioxide. They take it in through tiny mouths (stomata) in their leaves and use it to build their bodies, just as we use oxygen to build up our bodies. It is remarkable that what we do not want, the plant do. Too much carbon dioxide in the air will kill a man, yet plants cannot live and grow without it.

Besides oxygen, nitrogen, and carbon dioxide there are small quantities of other gases in the atmosphere, by far the most important is moisture or water vapor.

Pressure of the Atmosphere:

We must picture the earth as a ball surrounded by a coat or envelope of air- the atmosphere. The upper layers are pressing down on the lower layers, so the air there is much

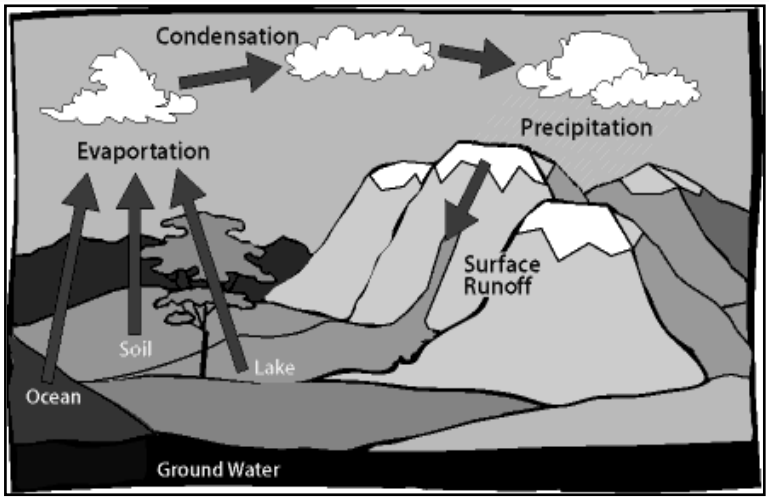
denser and heavier, whilst in the upper layers it is thin or rarefied.

Wherever we may be when we read this, we shall have pressing down upon us a column of air many miles high. Although we do not feel it, this column of air is exerting a pressure equal to 15Ib.

The air pressure at sea-level is affected by several factors:

1- Temperature, heat causes air to expand and become less dense, and so when the temperature is high the pressure is low.

2- Water vapor, air with much water vapor lighter than air



alone. so, the pressure is often less in rainy weather when the air is damp.

If there were a uniform ocean over the whole surface of the world there would be certain marked high-pressure belts and certain marked low-pressure belts arranged as follows:

A- low-pressure belt round the equator.

The equatorial low-pressure belt is caused by the great heat making the air hot and therefore light, and by the large quantity of water vapor, the air is always damp.

B- high-pressure belts just outside the tropics in both North and South hemisphere.

The high-pressure belts, it is reasonable to expect abet of high pressure near the tropics

C- low-pressure regions over the cold regions round the latitudes towards the Africa and Antarctic circles.

The circus, -polar low-pressure areas are caused largely by the rotation of the earth, for the rotation swings the bulk of the air towards the equator.

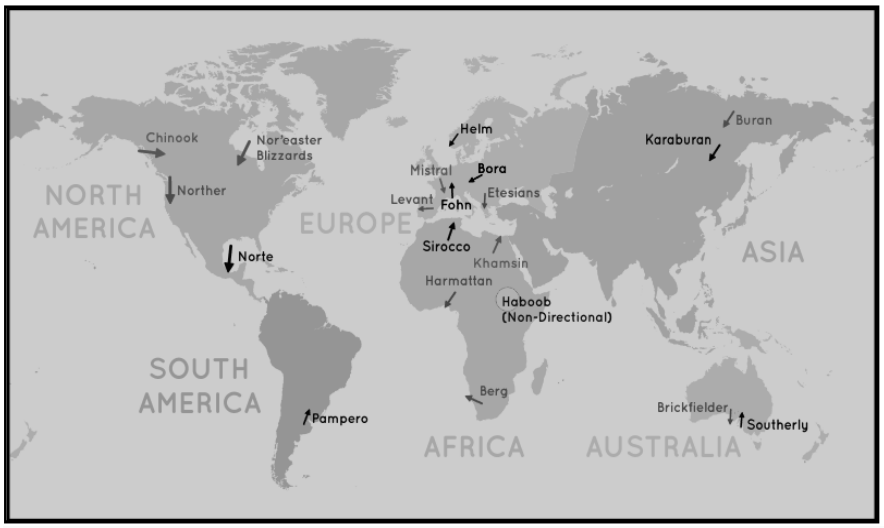
D- High- pressure areas over the poles.

At the poles themselves there are high-pressure centers, probably caused by extreme cold.

Notice the movement of the air in the upper part of the atmosphere. The heated air of the equator rises and flow away pole wards. It becomes cooled and commences to sink towards the earth along the high-pressure belts.

Temperature and Movements of the Atmosphere

Temperature of the atmosphere: The earth's surface obtains



nearly all its heat from the sun. The sun's rays do not heat whole surface of the earth equally. A place directly under the sun gets more heat than a place which is sloping away from the sun. At the equator where the sun is overhead for a greater part of the year, a bundle of sun's rays is only spread over a small area, but near the poles the sun is never overhead, the sale number of rays is spread over a much larger area. The sun's too, lose some of their heat in passing through the atmosphere. The most important are the maximum temperature and the minimum temperature.

Temperature records must be very carefully kept for each day; each day has its maximum, minimum and mean temperature. In India it is easier for the wind to blow

parallel to the mountain chains than across them. In China the great land mass is to the north-west and the sea to the south-east, so the monsoon blows from the south-east India, Indo-China, China and North-west Australia are the most important monsoon countries, but monsoon winds are also founding in other parts of the world. Notice: The South-East Trade Wind advances across the equator and becomes the South-West Monsoon in India. Local Winds The presence of high mountains, hot desert, etc, often causes winds, which receive special names in different parts of the world. Some like the Sirocco which blows from the Sahara across to Italy, are very hot. Other which blow from the mountains are very cold, sometimes air descending from mountains is warmed by compression and forms the warm Fohn or Chinook winds.

Chapter 14

The Climates of the world

Climate is the long-term pattern of weather in a particular area. Weather is the state of the atmosphere over short periods of time. Weather can change from hour to hour, day to day, month to month or even year to year.

A region's weather patterns, tracked for more than 30 years, are considered its climate.

Climate Conditions:

A region's climate is something like a person's personality. It is usually constant, but there may be surprises. Just as someone with a cheerful attitude will sometimes become sad, an area with a generally mild climate will occasionally experience extreme rainfall or drought. But because climates are mostly constant, living things can adapt to them.

The enormous variety of life on Earth is largely due to the variety of climates that exist and the climate changes that have occurred in the past.

Climate has influenced the development of cultures and civilizations. People everywhere have adapted in various ways to the climates in which they live.

Clothing, for example, is influenced by climate. The warm clothing developed by Eskimo cultures of Asia and North America are necessary for survival in the cold, windy climate near the North Pole. Grass skirts, on the other hand,

are part of many cultures in warm, humid climates, such as Tahiti, an island in the South Pacific Ocean.

Climate also influences where and when a civilization constructs housing or other buildings. The ancient Anasazi people of southern North America built apartments into tall cliffs. The sheltered, shady area kept residents cool in the hot, dry desert climate.

The development of agriculture was very dependent on climate. Ancient agricultural civilizations, such as those in Greece and India, flourished where the climate was mild. Communities could grow crops every season, and experiment with different types of foods and farming techniques.

1-Tropical Climate:

Much of the equatorial belt within the tropical climate zone experiences hot and humid weather. There is abundant rainfall due to the active vertical uplift or convection of air that takes place there, and during certain periods, thunderstorms can occur every day. Nevertheless, this belt still receives considerable sunshine, and with the excessive rainfall, provides ideal growing conditions for luxuriant vegetation. The principal regions with a tropical climate are the Amazon Basin in Brazil, the Congo Basin in West Africa and Indonesia.

Because a substantial part of the Sun's heat is used up in evaporation and rain formation, temperatures in the tropics rarely exceed 35°C; a daytime maximum of 32°C is more common. At night the abundant cloud cover restricts heat loss, and minimum temperatures fall no lower than about 22°C. This high level of temperature is maintained with little variation throughout the year. The seasons, so far as they do exist, are distinguished not as warm and cold periods but by variation of rainfall and cloudiness. Greatest rainfall occurs when the Sun at midday is overhead. On the equator this occurs twice a year in March and September, and consequently there are two wet and two dry seasons.

2- The tropical Climate, or Climate of the Savanna or Tropical Grassland:

This climate is well developed in Africa. As usual, rains follow the sun and so the heaviest rainfall occurs soon after the sun has been shining vertically, whilst the dry seasons occurs in the colder part of the year.

This type of climate is found in the Sudan and Brazil in South America.

3-The Monsoon Climate:

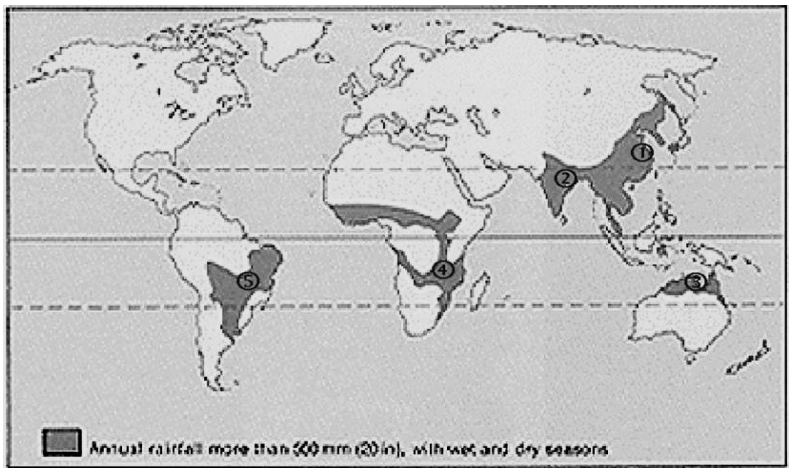
The monsoon Climate is very similar to the Tropical climate, but the rainfall is caused in different way. This

climate occurs around the Indian Ocean, especially in India, Burma, North Western Australia, and Ethiopia in Africa. There are small regions in north western South America which have a monsoon rainfall.

There is the cool season with little rain, lasting in India and Burma from about November to February; then the temperature begins to get higher, and there is the hot season from March to June.

Another name for the Monsoon Climate is the Summer Rains Climate, for the rain falls in the summer of the year.

4- The Climate of the Great Deserts:



Passing from the region of the Tropical or monsoon Climates towards the poles we find regions which are very hot and dry so dry that plants cannot grow.

The trade winds blow away from them towards the poles, and there are no winds which bring rain into the regions.

Some of the regions are dry too, like the center of Asia, they are very far from the sea.

We may divide these deserts into two group:

A- The hot desert, occupying lowlands along the Tropics of Cancer and Capricorn.

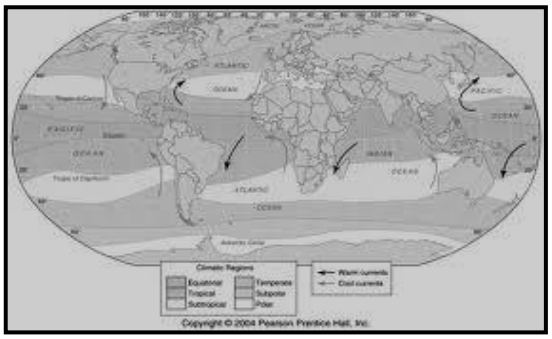
Examples are the Sahara, the desert of Arabia, and the great Indian desert. In the southern Hemisphere there are desert in Australia, south Africa (Kalahari), and south America (Atacama).

B- The Mid-Latitude Desert, usually found on plateaus outside the tropics. They are much colder in the cold season and may be covered with snow. Example are the are the deserts of Iran, and Colorado in North America.

5- Mediterranean Climate:

As the sun moves north and south of the equator during the year, so the main wind belts of the world swing with it. There are parts of the earth between latitudes 30° which in summer are in the northern part of the Trade wind belt, and so are hot and dry like the desert which join join them on the side nearer equator.

In winter, however, these regions come under the belt of westerly winds, and so enjoy moist, mild weather. In other words, this is the Winter Rain Climate.



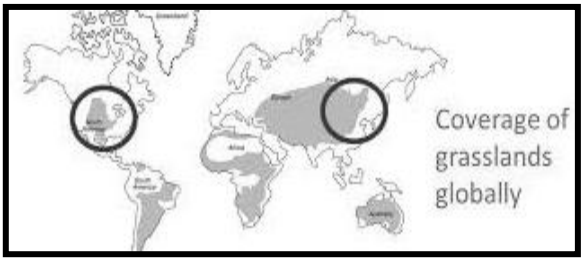
The Mediterranean Climate is so called because it is found all round the
Mediterranean Sea, but it is also found on the western sides of North and South America, South Africa, and South Australia

6- Warm Temperature, East Coast Climate:

The Mediterranean climate is found in region on the western sides of the continents, but on the eastern side just out – side the Tropics, there are sometimes regions having a warm, moist summer and a cold sometimes dry, winter. You will see this is very like the Monsoon climate. China and Eastern Australia are
examples, but there is a very considerable's difference between China, with very cold winters, and the other regions.

7- Cool Temperature, Oceanic Climate:

We come next to those regions which are in the westerly wind belt during the whole year.



They have rain all the year. The winter are cool, and the summer mild. This is the climate of north- western Europe, western Canada, southern Chile. The winter are much colder.

8-Mid- Latitude Continental or Grassland Climate:

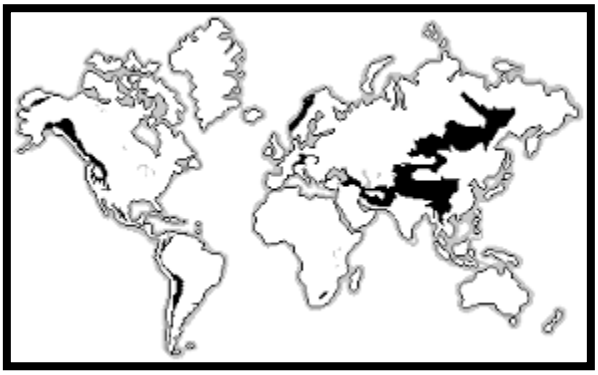
The summer are very hot and the winter are very cold – a typical Continental Climate. Rain falls lastly in spring and early summer, but it is not heavy.

In winter there is a light snowfall. The prairies of North America, the Steppes of south Russia and south Siberia, and south America (Pampas), are a good example of these climate.

9-Cold Temperature Climate:

The cool temperate Ocean climate passes gradually into a colder climate where much of the moisture falls as snow and not as rain. this is the region of colder forests, and occurs as a great belt across North America, Northern Europe, and Northern Asia.

10- Arctic or Cold Desert Climate:



Here the winters are very long and very cold, and there is only a very short, sharp summer. This climate occurs mainly inside the Arctic and Antarctic circles.

11- Alpine Climate:

The effect of Climbing up a mountain is very like going a great distance towards the poles. The climate changes as we ascend and gets colder. Near the tops of high mountains, it is very cold and there is perpetual snow above the snow- line.

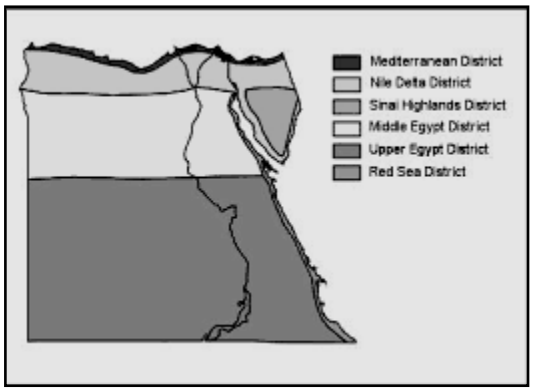
But the climate just below the snow - line is not quite the same as in Arctic or Antracticlands, because on the mountain – top the air is very thin. So, we have a special name for the climate found on high mountains the Alpine Climate, named after the great mountain chain of Europe, the Alps

-Climate of Egypt:

The average annual temperature increases moving southward from the Delta to the Sudanese border, where

temperatures are similar to those of the open deserts to the east and west. In the north, the cool temperatures of Alexandria during the summer have made the city a popular resort. Throughout the Delta and the northern Nile. Valley, there are occasional winter cold spells accompanied by light frost and even Snow.

At Aswan, in the south, June temperatures can be as low as 10° C at night and as high as 41° C during the day when the sky is clear. Egypt receives fewer than eighty millimeters of precipitation annually in most areas. Most rain falls along the coast, but even the wettest area, around Alexandria receives only about 200 millimeters of precipitation per year. Alexandria has relatively high humidity, but sea breezes help keep the moisture down to a comfortable level.



Moving southward, the amount of precipitation decreases suddenly. Cairo receives a little more than one centimeter of precipitation each year.

Some areas will go years without rain and then experience sudden downpours that result in flash floods. Sinai receives

somewhat more rainfall than the other desert areas, and the region is dotted by numerous wells and oases, which support small population centers that formerly were focal points on trade routes.

Water drainage toward the Mediterranean Sea from the main plateau supplies sufficient moisture to permit some agriculture in the coastal area, particularly near Al Arish.

A phenomenon of Egypt's climate is the hot spring wind that blows across the country. The winds, known to Europeans as the sirocco and to Egyptians as the khamsin, usually arrive in April but occasionally occur in March and May.

-The winds:

form in small but vigorous low-pressure areas in the Isthmus of Suez and sweep across the northern coast of Africa Unobstructed by geographical features, the winds reach high velocities and carry great quantities of sand and dust from the deserts. These sandstorms,

often accompanied by winds of up to 140 kilometers per hour, can cause temperatures to

rise as much as 20° C in two hours.

The winds blow intermittently and may continue for days, cause illness in people and animals, harm crops, and

occasionally damage houses and infrastructure.

Climate is the average of the weather. We must be quite sure we understand, what that means, because climate is one of the most important subjects in geography. In Britain there is summer and winter, but rain falls at all seasons of the year. At the same time the summer are never very hot nor the winter very cold.

The countries round the Mediterranean Sea have quite a different type of climate. There the years comprises a short, mild, moist winter, and a long hot dry summer. Every year there is these seasons.

In some years the rain during the winter or rainy season is very abundant, in other years not nearly so much rain falls. But that does not make any difference to the truth of the statement that each year has its west winter and dry summer.

Sometimes we may have a hot day in the midst of the winter, and we can say that the weather for that day is

exceptional. But one exceptional day does not alter climate, because the climate refers to the normal or usual condition of the weather.

In the same way as we calculate average rainfall as the average over a number of the years, we can find the average temperature, pressure, humidity, wind direction, and so on these averages for a month, for a season, or for the year- all these average considered together will tell us of the climate. Thus, weather refers to short period such as a day a week, but climate to the normal conditions over many years.

-Dew:

In the early morning the grass and ground rare often quite wet this deposit of water is called dew.

-Fog and Mist:

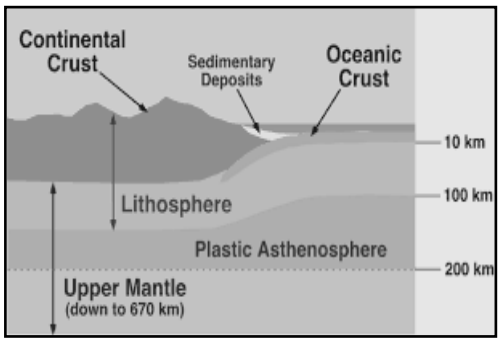
When the water vapor is condensed but remains suspended in the air near the surface of the earth like a cloud, it is called a mist or Fog.

- Precipitation:

This is a general term which includes both rainfall and snowfall as well as hail and sleet.

-Essentials for Rainfall:

In order to have rain two important conditions must be satisfied.

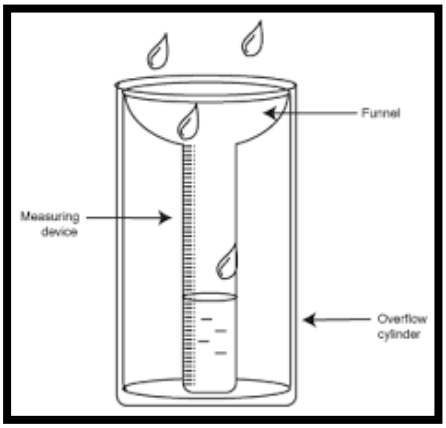


-Rain Shadow:

when a moisture equal laden wind is forced to rise to passé over a mountain range, it must be cooled, and is sure to lose some of its moisture.

-Rain-Gauge:

Rainfall is measured by means of a rain-gauge. All the which falls over a certain small area passes into a funnel, and is collected in a jar where it cannot evaporate and where it can be measured.



-Rainfall Maps:

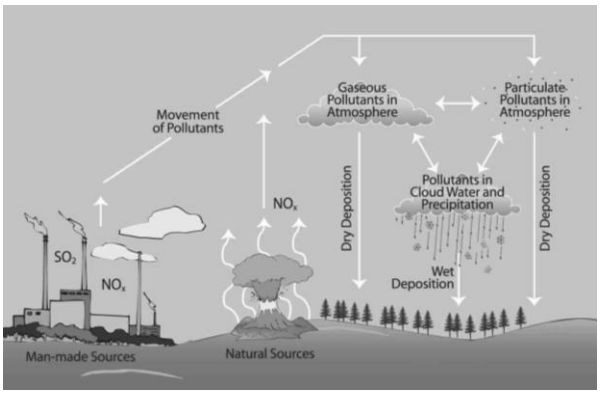
On a map of any country we can mark the monthly or yearly averages. Sometimes it is better to use the amount for season, such as the rainy season.

Chapter 15

Glossary of Geography

Absolute Humidity:

The mass of water vapor in the atmosphere per unit of volume of space.



• **Accessibility:**

A location characteristic that permits a place to be reached by the efforts of those at other places.

• **Accessibility Resource:**

A naturally occurring landscape feature that facilitates interaction between places.

• **Acid Rain:**

Rain that has become more acidic than normal (a pH below 5.0) as certain oxides present as airborne pollutants are absorbed by the water

droplets. The term is often

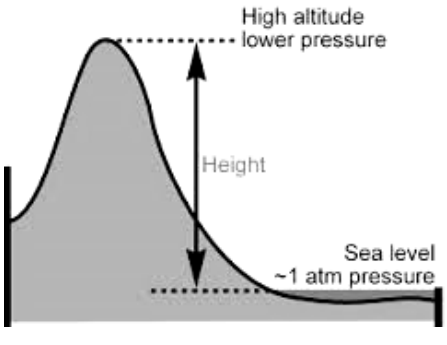
applied generically to all acidic precipitation.

• **Air Mass:**

A very large body of atmosphere defined by essentially similar horizontal air temperatures. Moisture conditions are also usually similar throughout the mass.

• **Altitude:**

Height of an object in the atmosphere above sea level.



• **Alluvial:**

Clay, silt, gravel, or similar material deposited by running water.

• **Alluvial Soils:**

deposited through the action of moving water. These soils lack horizons and are usually highly fertile.

Anthracite:

A hard coal containing little volatile matter

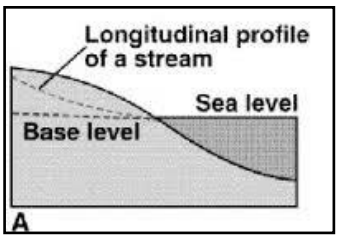
• **Arete:**

A sharp, narrow mountain ridge. It often results from the erosive activity of alpine glaciers flowing in adjacent valleys.

areas.

• **Atlas:**

A bound collection of maps.



• **Badlands:**

Very irregular topography

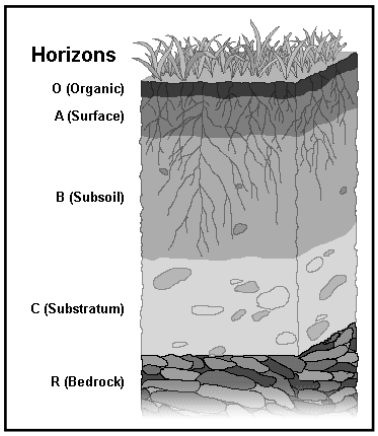
resulting from wind and water erosion of sedimentary rock.

• **Base Level:**

The lowest level to which a stream can erode its bed. The ultimate base level of all streams is, of course, the sea.:

• **Bedrock**:

The solid rock that underlies all soil or other loose material; the rock material that breaks down to eventually form soil.

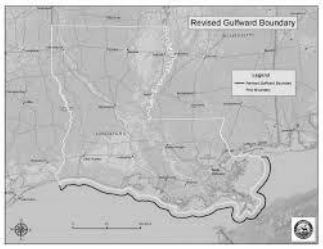


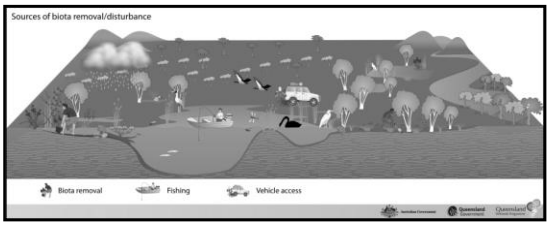
• **Bilingual**:

The ability to use either one of two languages, especially when speaking.

• **Biological Diversity**:

A concept recognizing the variety of life forms in an area of the Earth and the ecological interdependence of these life forms.





• **Biota**:

The animal and plant life of a region considered as a total ecological entity. :

• **Break–in–Bulk Point:**

Commonly, a transfer point on a transport route where the mode of transport (or type of carrier) changes and where large–volume

shipments are reduced in size. For example, goods may be unloaded from a ship and transferred to trucks at an ocean port.

Boundary:

A line indicating the limit of a country, state, or other political jurisdiction.

• **Butte:**

An isolated hill or mountain with steep or precipitous sides, usually having a smaller summit area than a mesa.

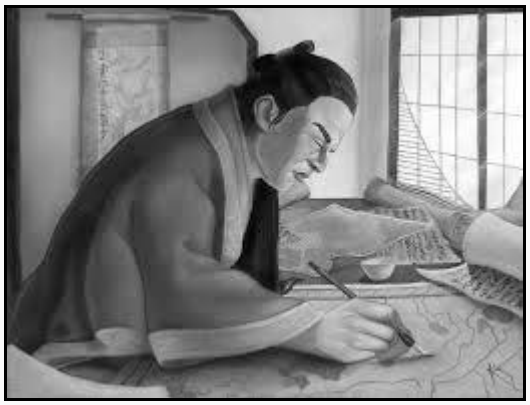
• **Cap rock:**

A strata of erosion–resistant sedimentary rock (usually limestone) found in arid areas. Cap rock forms the top layer of most mesas and buttes.

• **Carrying Capacity:**

The number of people that an area can support given the quality of the natural environment and the level of technology of the population.

Cartographer:



A person who draws or makes maps or charts.

• **CBD:**

The **c**entral **b**usiness **d**istrict of an urban area,

• **Chaparral:**

A dense, impenetrable thicket of shrubs or dwarf trees.

• **Chinook:**

A warm, dry wind experienced along the eastern side of the Rocky Mountains in the United States and Canada. Most common in winter and spring, it can result in a rise in temperature of 20C (35 to 40F) in a quarter of an hour

• **Climax Vegetation:**

The vegetation that would exist in an area if growth had proceeded undisturbed for an extended period.

• **Confluence:**

The place at which two streams flow together to form one larger stream

• **Continental Climate:**

The type of climate found in the interior of the major continents in the middle, or temperate, latitudes. The climate is characterized by a great seasonal variation in temperatures, four distinct seasons, and a relatively small annual precipitation.

• **Continental Divide:**

The line of high ground that separates the oceanic drainage basins of a continent; the river systems of a continent on opposite sides of a continental divide flow toward different oceans.

• **Continentally:**

The quality or state of being a continent.

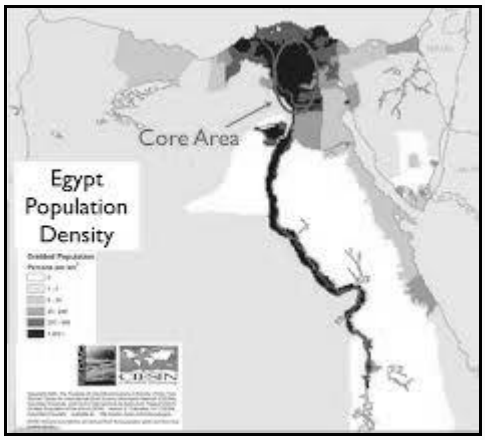
• **Coulee**:

A dry canyon eroded by Pleistocene floods that cut into the lava beds of the Columbia Plateau in the western United States.

• **Conurbation:**

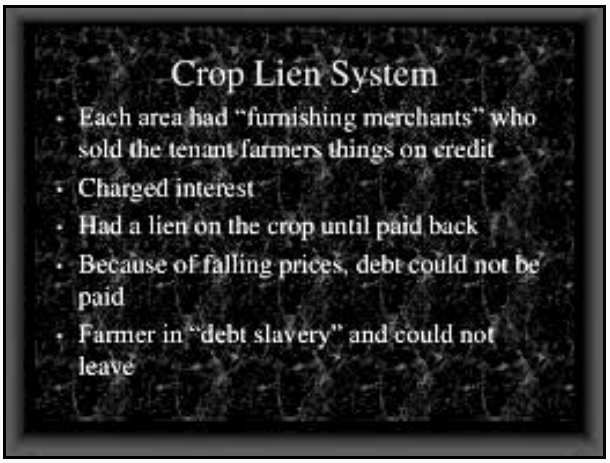
An extensive urban area formed when two or more cities, originally separate, coalesce to form a continuous metropolitan region.

• **Core Area:**



The portion of a country that contains its economic, political, intellectual, and cultural focus. It is often the center of creativity and change

• **Crop-lien System:**

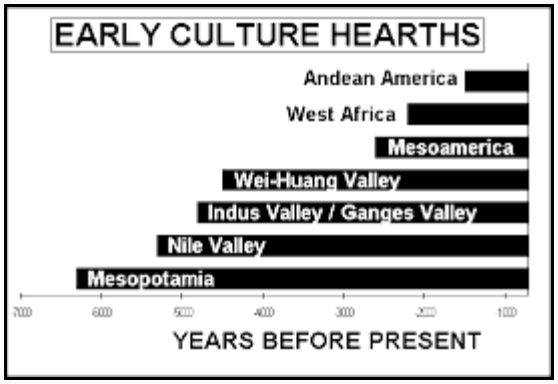


growing season to pay for farming operations, with the subsequent harvest used as collateral for the loan.

• **Culture:**

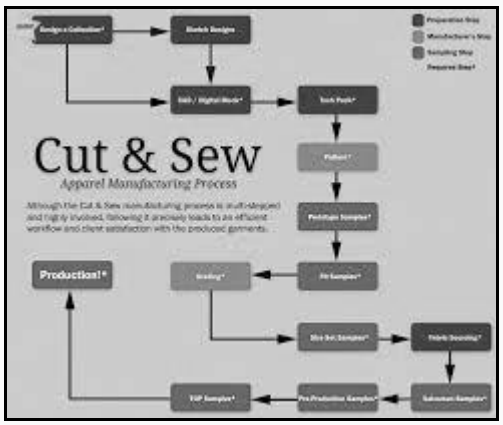
The accumulated habits, attitudes, and beliefs of a group of people that define for them their general behavior and way of life; the total set of learned activities of a people.

• **Culture Hearth:**



• The area from which the culture of a group diffuse.

• **Cut-and-Sew Industry:**



The manufacture of basic ready-to-wear clothing. Such facilities usually have a small fixed investment in the manufacturing facility

• **Deciduous Forest:**

Forests in which the trees lose their leaves each year.

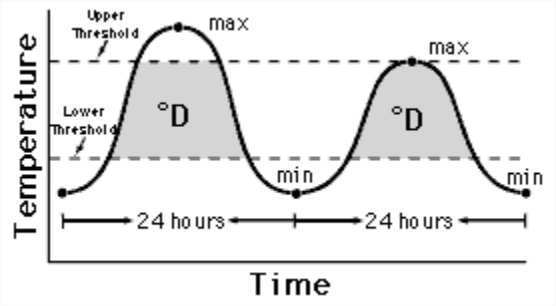
• **De Facto Segregation:**

The spatial and social separation of populations that occurs without legal sanction.

Degree:

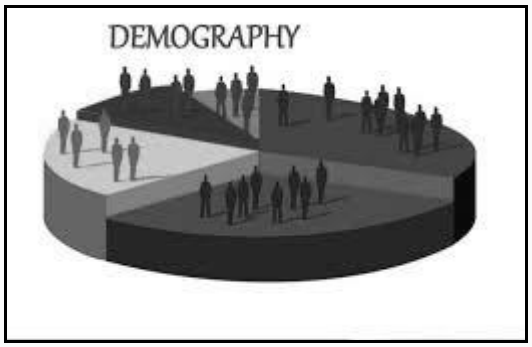
A unit of angular measure: A circle is divided into 360 degrees, represented by the symbol °. Degrees are used to divide the roughly spherical shape of the Earth for geographic and cartographic purposes.

• **Degree Day:**



Deviation of one-degree temperature for one day from an arbitrary standard, usually the long-term average temperature for a place

• **Demography:**



The systematic analysis of population.

• **Discriminatory Shipping Rates:**

A transportation charge levied in a manner that is inequitable to some shippers, primarily because of those

shippers' location.

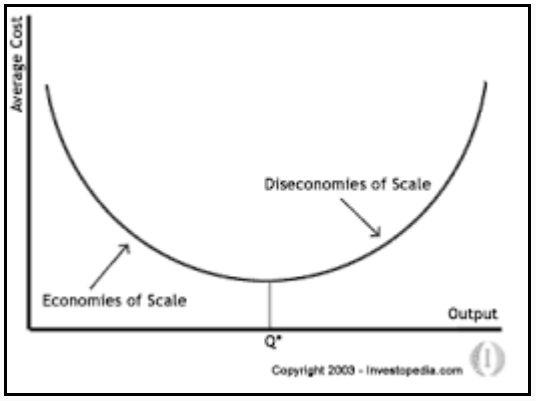
• **Dome:**

An uplifted area of sedimentary rocks with a downward dip in all directions; often caused by molten rock material pushing upward from below. The sediments have often eroded تآكل away, exposing the rocks that resulted when the molten material cooled.

Economies of Agglomeration:

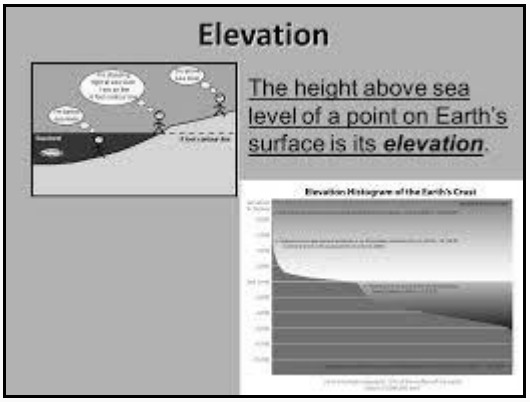
The economic advantages that accrue to an activity by locating close to other activities; benefits that follow from complementarily or shared public services.

• **Economies of Scale:**



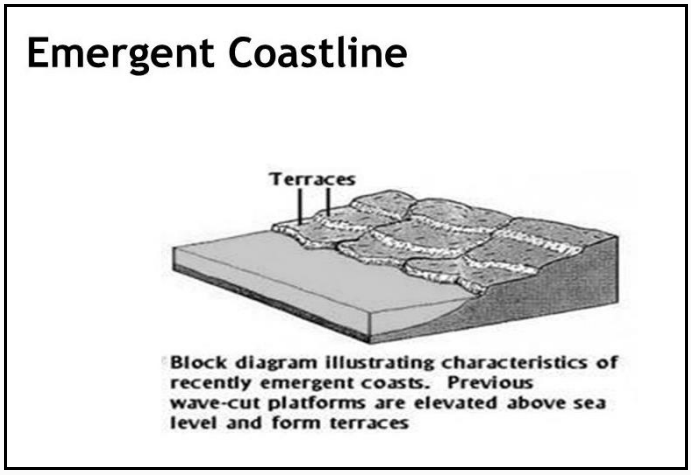
Savings achieved in the cost of production by larger enterprises because the cost of initial investment can be defrayed across a greater number of producing units.

Elevation:

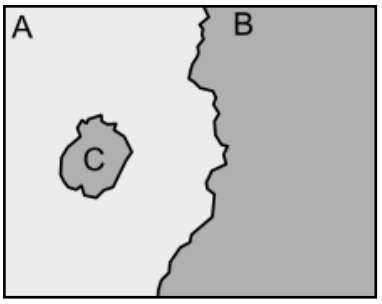


The height of a point on the Earth's surface above sea level.

• **Emergent Coastline:**



A shoreline resulting from a rise in land surface elevation relative to sea level.



• **Enclave:**

A tract or territory enclosed within another state or country

• **Erratic:**

A boulder that has been carried from its source by a glacier and deposited as the glacier melted. Thus, the boulder is often of a different rock type from surrounding types.

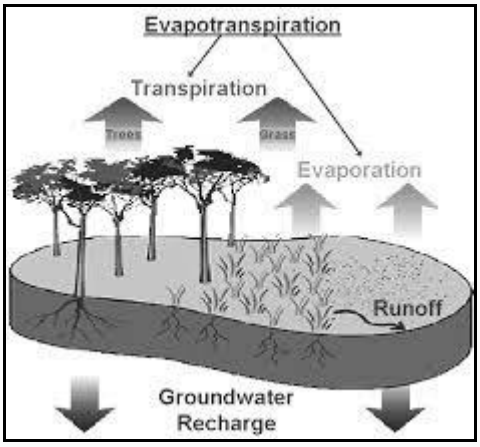
• **Escarpment:**

A long cliff or steep slope separating two comparatively level or more gently sloping surfaces and resulting from erosion or faulting.

• **Estuary:**

The broad lower course of a river that is encroached on by the sea and affected by the tides.

• **Evapotranspiration:**



The water lost from an area through the combined effects of evaporation from the ground surface and transpiration from the vegetation.

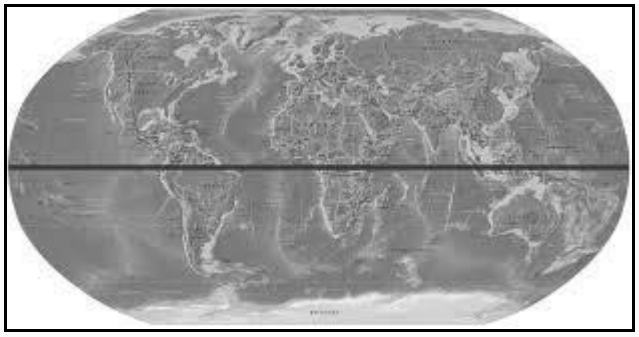
• **Exotic Stream:**

A stream found in an area that is too dry to have spawned such a flow. The flow originates in some moister section.

• **Exurb:**

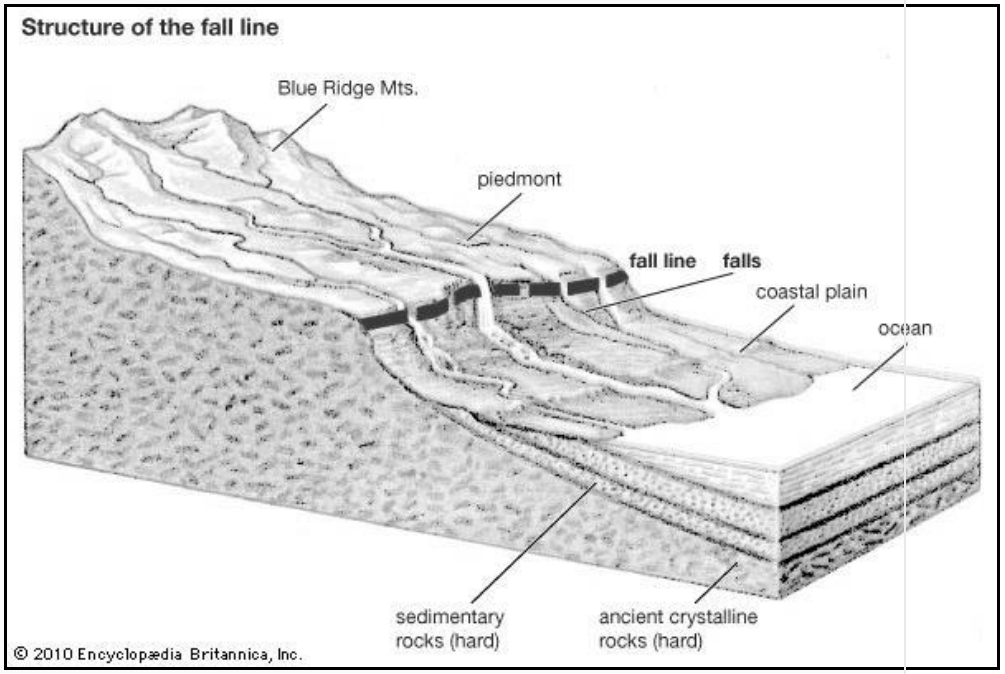
A region or district that lies outside a city and usually beyond its suburbs.

• **Equator:**



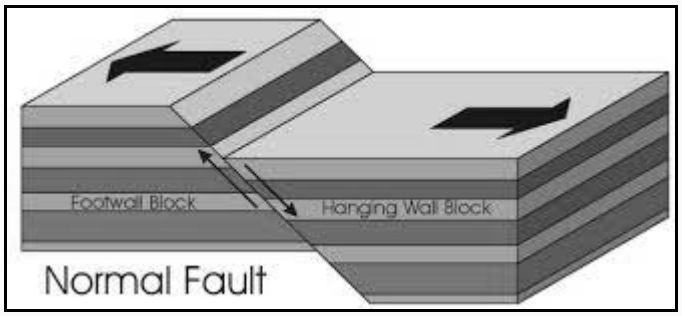
An imaginary circle around the Earth halfway between the North Pole and the South Pole; the largest circumference of the Earth.

Fall Line:



The physiographic border between the piedmont and coastal plain regions

Fault:

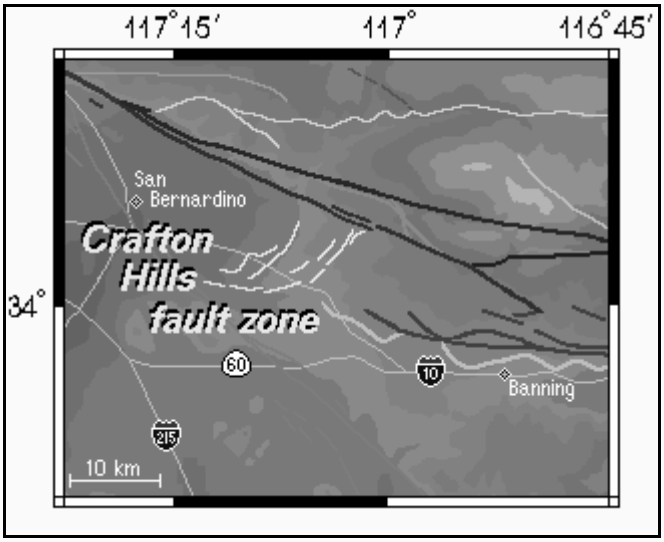


A fracture in the Earth's crust accompanied by a displacement of one side of the fracture.

Functional Diversity:

The characteristic of a place where a variety of different activities.

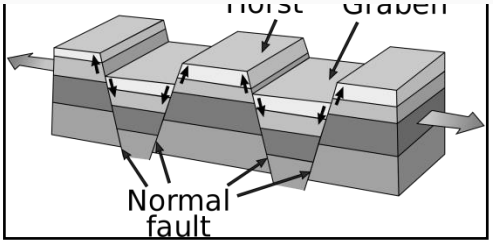
Fault Zone:



A fracture in the Earth's crust along which movement has occurred.

Federation:

A form of government in which powers and functions are divided between central government and a number of political subdivisions that have a significant degree of political autonomy.



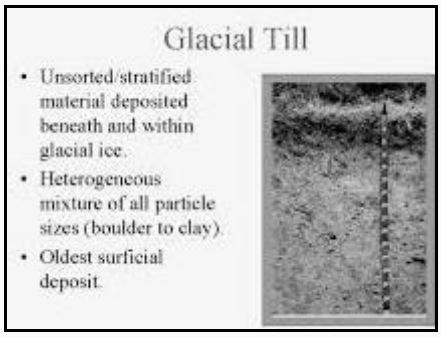
Fault Block Mountain:

A mountain mass created either by the uplift of land between faults or the subsidence of land outside the faults

Geomorphology:

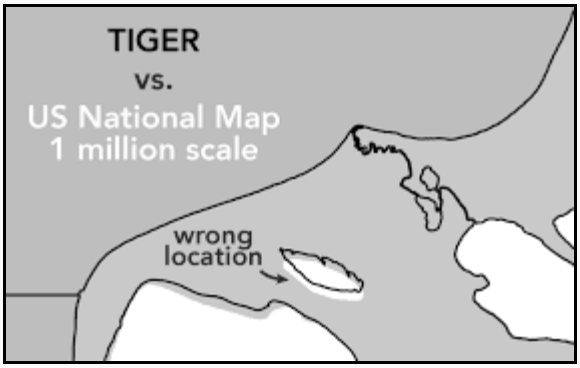
The study of the arrangement and form of the Earth's crust and of the relationship between these physical features and the geologic structures beneath.

Glacial Till :



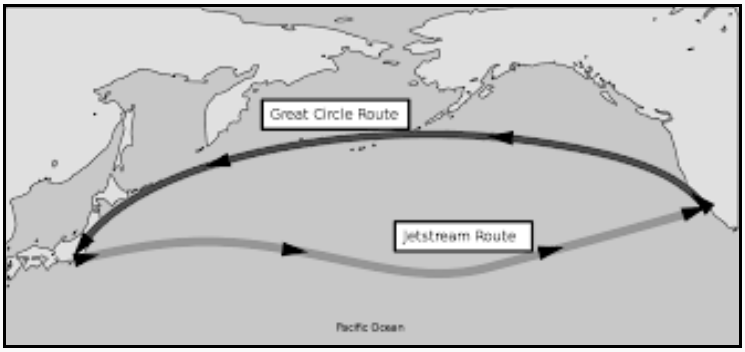
The mass of rocks and finely ground material carried by a glacier.

Globe :



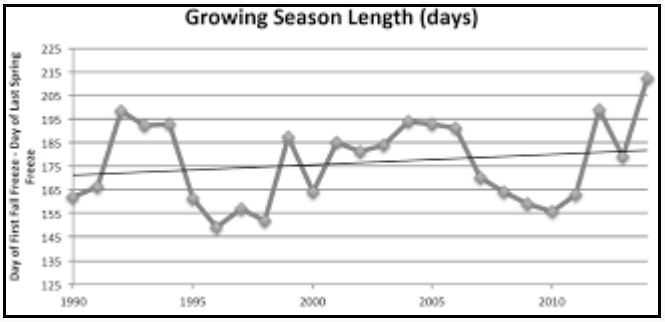
A true-to-scale map of the Earth that duplicates its round shape and correctly represents areas.

Great Circle Route:



The shortest distance between two places on the Earth's surface.

Growing Season:

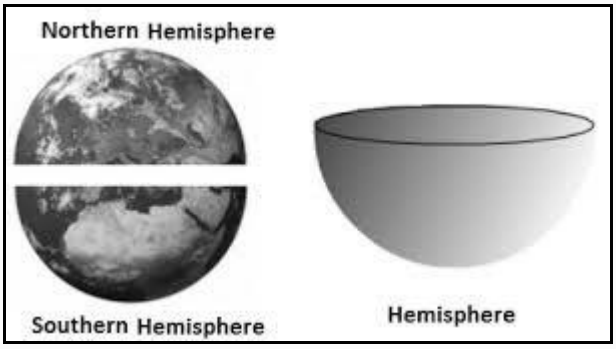


The period from the average date of the last frost

Heavy Industry:

Manufacturing activities engaged in the conversion of large volumes of raw materials and partially processed materials into products of higher value.

Hemisphere:

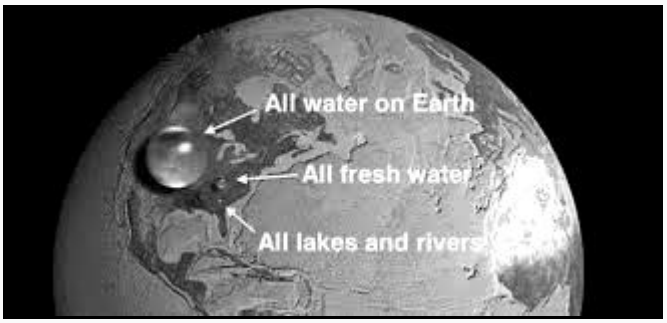


Half of the Earth, usually conceived as resulting from the division of the globe into two equal parts 'north and south or east and west.

Horizon:

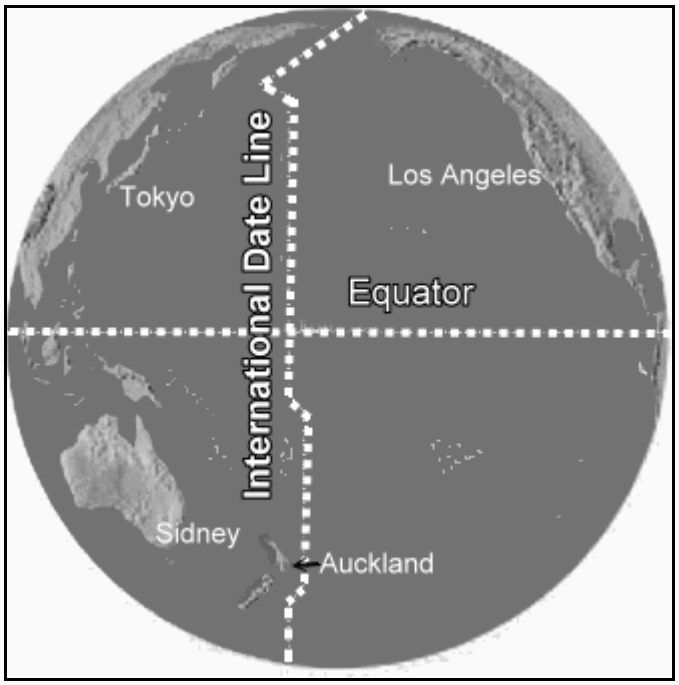
A distinct layer of soil encountered in vertical section.

Hydrograph:



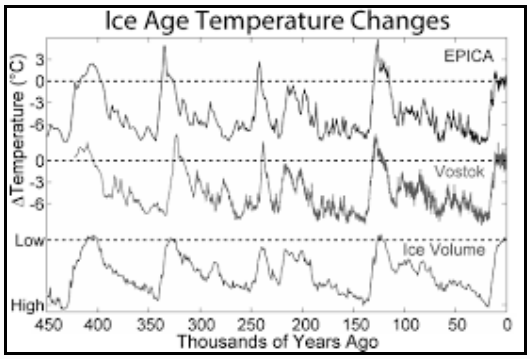
The study of the surface waters of the Earth.

International date line:



A line of longitude generally 180 degrees east and west of the prime meridian.

Ice Age:

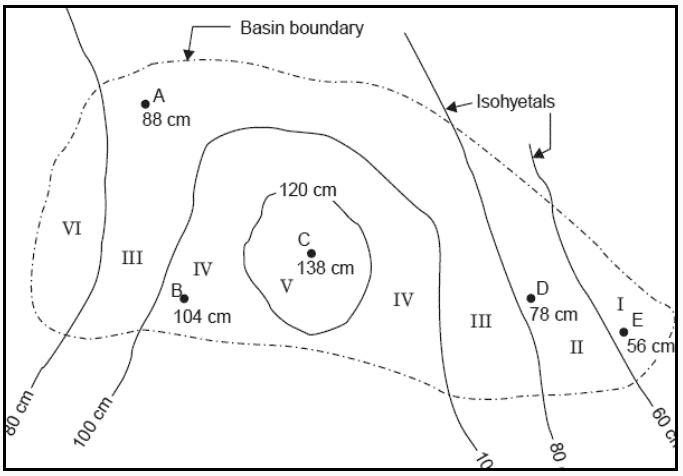


A time of widespread glaciations (Pleistocene).

Igneous Rocks:

Rocks formed when molten (melted) materials harden

Isohyets:



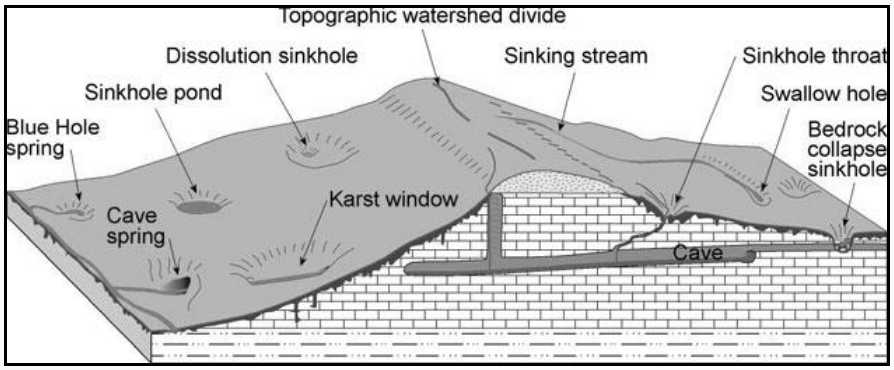
A line on a map connecting points that receive equal precipitation.

Insular:

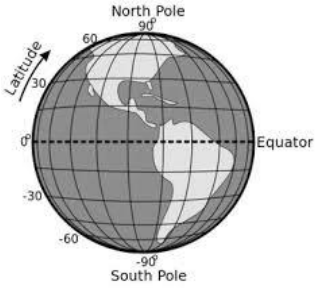
Either of an island, or suggestive of the isolated condition

of an island.

Karst:



An area possessing surface topography resulting from the underground solution of subsurface limestone or dolomite.



A nearly level land area that was formed as a lake bed.

Latitude:

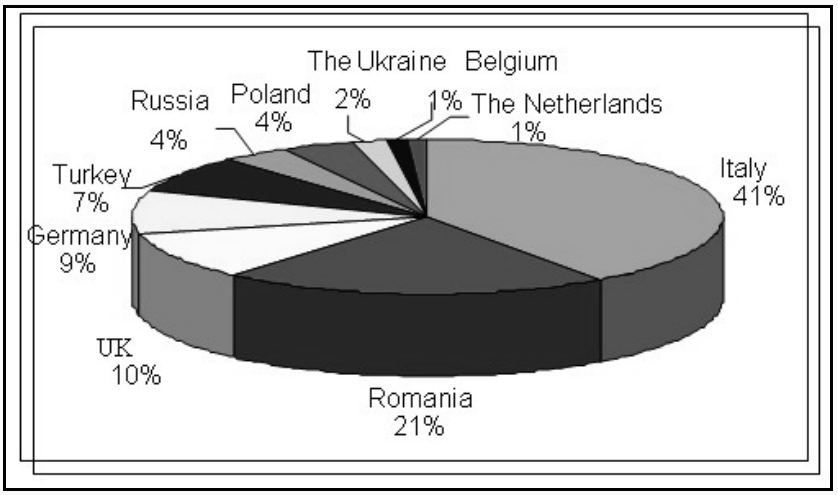
Imaginary lines that cross the surface of the Earth parallel

to the Equator,

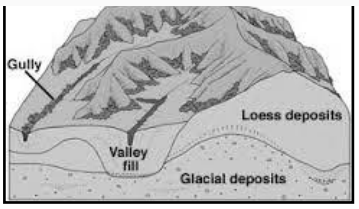
• **Legend**:

key to what the symbols or pictures in a map mean.

Light Industry:

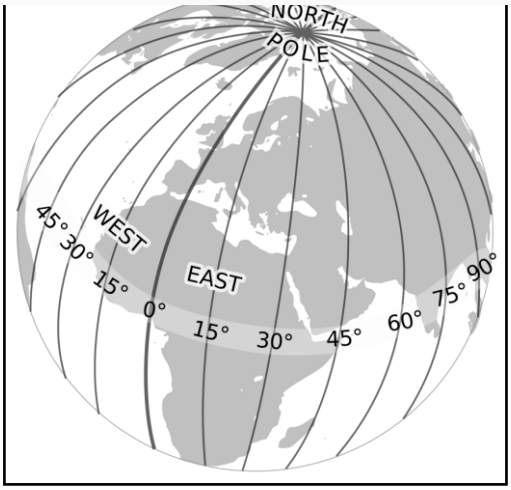


Manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit weight.



• **Loess**:

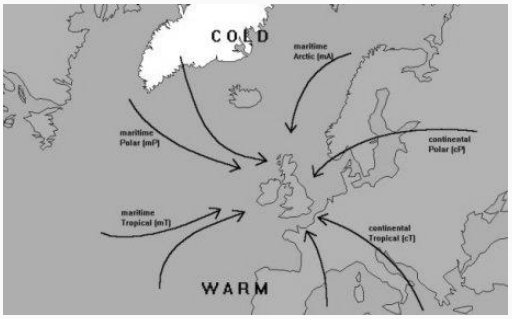
A soil made up of small particles that were transported by the wind to their present location.



• **Longitude**:

A measure of distance east and west of a line drawn between the North and South Poles and passing through the Royal Observatory at Greenwich, England.:

Maritime Climate:



A climate strongly influenced by an oceanic environment.

Mediterranean Climate:

A climate characterized by moist, mild winters and hot, dry summers.

Metropolitan Coalescence:

The meaning of the urbanized areas of separate metropolitan regions; Megalopolis is an example of this process.

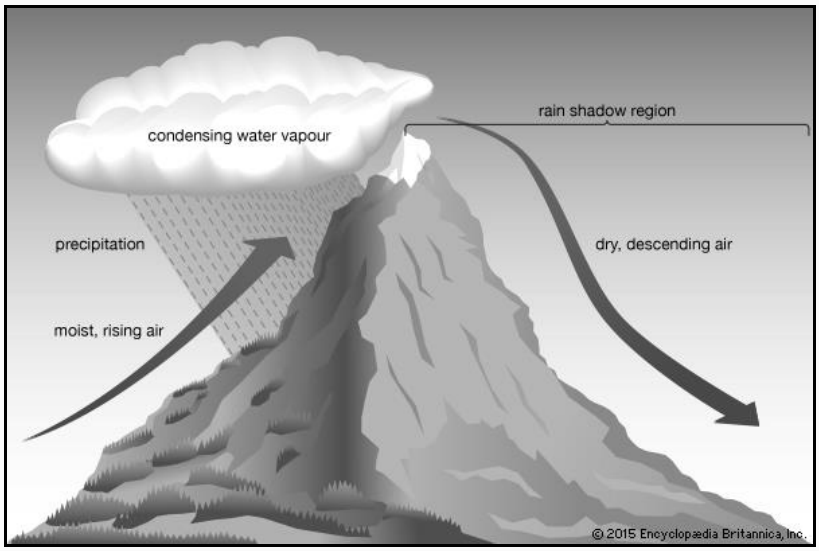
Moraine:

The rocks and soil carried and deposited by a glacier.

Nodal Region:

A region characterized by a set of places connected to another place by lines of communication or movement

Orographic Rainfall:



Precipitation that results when moist air is lifted over a topographic barrier such as a mountain range.

• **Outwash:**

Rocky and sandy surface material deposited by melt water that flowed from a glacier.

• **Overburden:**

Material covering a mineral seam or bed that must be removed before the mineral can be removed in strip mining

Panhandle:

A narrow projection of a larger territory

Physiography:

Physical geography

Pleistocene:

PERIOD	EPOCH	DATE BEFORE PRESENT
Quaternary	Recent	12,000 years
	Pleistocene	3 million
Tertiary	Pliocene	12 million
	Miocene	26 million
	Oligocene	35 million
	Eocene	55 million
	Paleocene	70 million

Period in geologic history

Precambrian Rock:

The oldest rocks, generally more than 600 million years old.

Post-industrial:

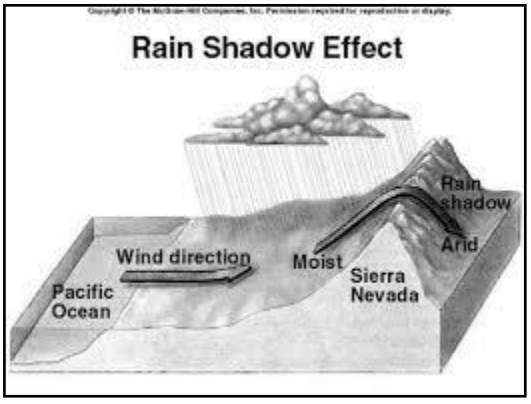
An economy that gained its basic character from economic activities

Primary Product:

A product that is important as a raw material in developed economies

Quaternary Sector:

That portion of a region's economy devoted to informational and idea-generating activities



• **Rain shadow:**

An area of diminished precipitation on the lee (downwind) side of a mountain or mountain range.

• **Region:**

An area having some characteristics or that distinguish it

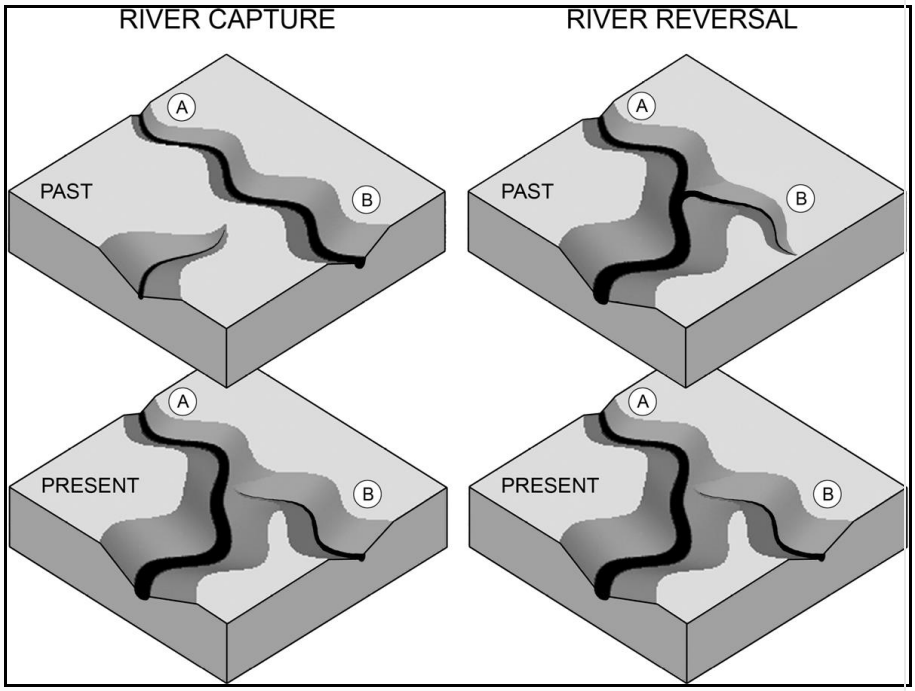
from other areas.

• **Riverine:**

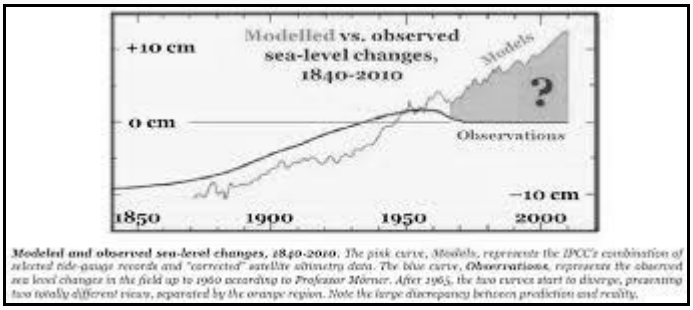
Located on or inhabiting the banks or the area near a river or lake

River Capture:

The river or one of its tributaries may invade the valley of anther river and capture and divert some of the waters of that river.



Sea level:



Modeled and observed sea-level changes, 1840-2010. *The pink curve, Models, represents the IPCC's combination of selected tide-gauge records and "corrected" satellite altimetry data. The blue curve,* ***Observations****, represents the observed sea level changes in the field up to 1950 according to Professor Mörner. After 1965, the two curves start to diverge, presenting two totally different views, separated by the orange region. Note the large discrepancy between prediction and reality.*

The ocean surface

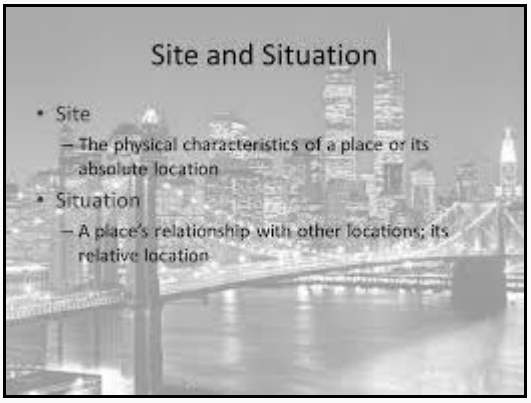
Second Home:

A seasonally occupied dwelling that is not the primary residence of the owner

Smog:

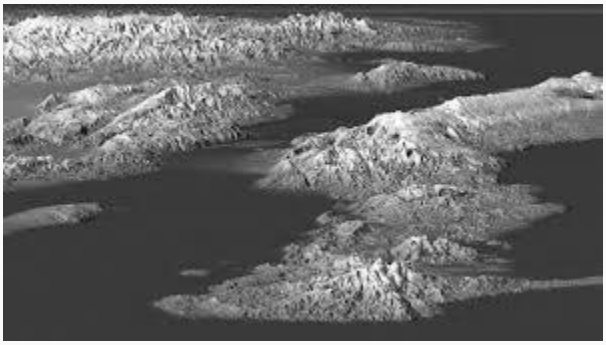
Mixture of particulate matter and chemical pollutants in the lower atmosphere, usually over urban areas.

Situation:



Features of a place related to its location relative to other places

• **Topography:**



The physical features of a place; or the study and depiction of physical features, including terrain relief

Tropics:

The area between the Tropic of Cancer ($21-1/2$ N latitude) and the Tropic of Capricorn ($21-1/2$ S latitude),

Transhumance:

The seasonal movement of people and animals in search of pasture

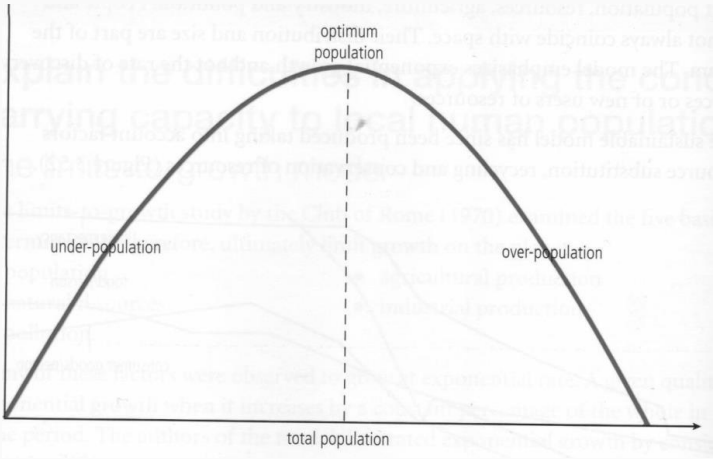
Time difference and Time Zones:

As the Earth rotates, different parts of the World (from East to West) are lighted by the Sun (sunrise) successively, and then move on to darkness (sunset).

Time-distance:

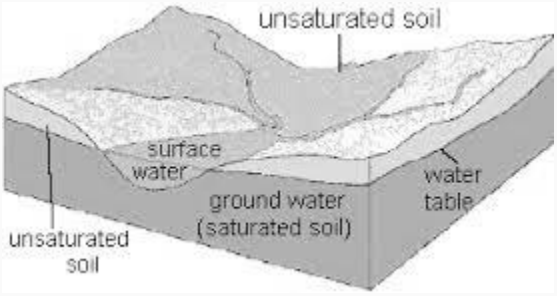
A time measure of how far apart places are (how long does it take to travel from place A to place B?).

Under population:



Economically, a situation in which an increase in the size of the labor force will result in an increase in per worker productivity.

Water Table:



The level below the land surface at which the subsurface material is fully saturated with water

Zoning:

The public regulation of land and building use to control the character of a place.